



INTELLISPEC™

Operator Guide

SOFTWARE VERSION: 6.0.047

MANUAL PART NUMBER: 81854 REV. 02

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Chapter 1 Pressco Introduction

Welcome!

Congratulations on your purchase of an Intellispec system! The Intellispec is a high-speed machine vision system designed specifically for product and online process monitoring. It is a powerful tool that provides inspection much more reliably than the human eye or sampling methods. The latest PC technology, powerful inspection algorithms, online adjustment capability, and inspection data storage allow the Intellispec to automatically inspect parts with extreme accuracy on high-speed lines.

The Intellispec will help you provide the highest quality of products shipped to your customers.

About This Operator Guide



IMPORTANT: *Keep this manual for future reference*

This book is considered an integral part of the system and should be kept handy for future reference as long as the system is being used in your plant.

The purpose of this manual is to describe the Operator-level functions of the software, safety information, and maintenance.

This manual:

- Is considered to be valid for Intellispec version 6.0.047. Contents of this manual are subject to change without notice.
- Is your responsibility to keep in good condition, in a dry place, and ready for consultation by the authorized users of the system.
- Contains the technology implemented at the time of selling and supplying the system and shall not be considered inadequate in case of technological enhancements in the machine or in the manual's illustrations.

Related books include:

- Intellispec Software Administrator Guide, which describes all the features of the software, and is intended for Administrator-level users
- Intellispec Hardware Guide (multiple options) and Inspection Module Addendums

The following types of alerts may appear in this guide:



DANGER! - Danger messages alert you to specific conditions that can cause serious or fatal personal injury. Danger messages give you important information which must be observed to prevent injury.



WARNING: - Warning messages indicate information which must be observed to prevent injury, data loss, or equipment damage.



CAUTION - Caution messages indicate important information which must be observed to prevent: loss of data, poor system performance, or equipment damage.

Note: Notes contain special information that warrants being set off from the body text as shown here.



IMPORTANT - Indicates prerequisites or information that must be observed to complete or understand a concept or task.

TIP: Provides helpful hints for completing a task.

Static Discharge Protection



Caution - Electronic components can be damaged by static electricity discharge.

Always observe the following precautions before removing, installing or handling any electronic components within the inspection system:

- Wear an anti-static wristband which is grounded to the Inspection System.
- Stand on an anti-static, grounded floor mat, and lay circuit boards on the mat during any board replacement.
- Keep circuit boards in static shield bags when storing and transporting. Ensure the bag is sealed.

Chapter 2 Safety Information

This section contains operator safety information that must be read before operating or servicing the system.



WARNING - This product contains no operator serviceable parts. Refer servicing to qualified personnel. To prevent electrical shock do not open cabinet doors whilst power is connected.



WARNING - Do not, under any circumstances, tamper with sealed machine parts or devices. This could result in the removal of protections that might create potentially hazardous conditions.



CAUTION - Possible hazardous optical radiation from LEDs. Do not stare at lamps.

Observe the following safety warnings when operating the system or working near it:



WARNING - Potential for projectiles to strike persons and cause injury. Keep clear of reject devices.



WARNING - Sensitive electronics and High Voltages may be exposed. Keep Processor Cabinet/ Electrical Control Box door closed.

Health Warning - Photosensitive Epilepsy



WARNING: PHOTSENSITIVE EPILEPSY/ SEIZURES

A small percentage of individuals may experience epileptic symptoms or seizures when exposed to certain patterns or flashing lights. Exposure to the flashing lights in vision inspection systems may also trigger epileptic symptoms or seizures in these individuals. These flashing lights may trigger epileptic symptoms or seizures in persons who have no history of epileptic symptoms or seizures. If you, or anyone in your family has an epileptic condition or has had seizures of any kind, consult your physician before operating this machinery.

IMMEDIATELY DISCONTINUE use and consult your physician if you experience any of the following symptoms while operating this machinery:

- Dizziness
- Altered vision
- Eye or muscle twitches
- Loss of awareness
- Disorientation
- Seizures
- Any involuntary movement or convulsion

Epileptic symptom or seizure triggers vary from person to person. Some common triggers are:

- Flashing lights used for vision inspection systems or fire alarms
- Certain video games or TV broadcasts containing rapid flashes or alternating patterns of different colors
- Bright, contrasting patterns such as white bars against a black background
- Flashing white light followed by darkness
- Stimulating images that take up your complete field of vision, such as being very close to a TV screen or computer monitor
- Certain colors, such as red and blue

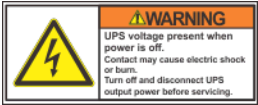
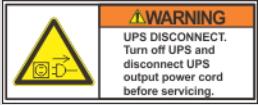
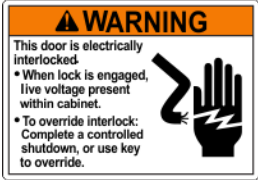
If you encounter something that might trigger epileptic symptoms or seizures without warning:

- Do not close your eyes (this could cause a flicker effect)
- Do not look directly at the flashing lights or trigger source
- Do cover one eye with the palm of your hand immediately
- Do turn away from the flashing lights or trigger source

Symbols Used With This System

The following symbols are used on or near the Pressco system. Be aware of potential risk hazards.

Symbol	Meaning
	CAUTION: Risk of danger. Refer to accompanying user documentation before use.
	WARNING: Risk of electric shock
	WARNING: Arc flash and shock hazard
	WARNING: Risk of electrical shock
	WARNING: Risk of burns from hot surface
	WARNING: Hand crush hazard
	On (supply)
	Off (supply)
	Alternating current
	Protective conductor terminal

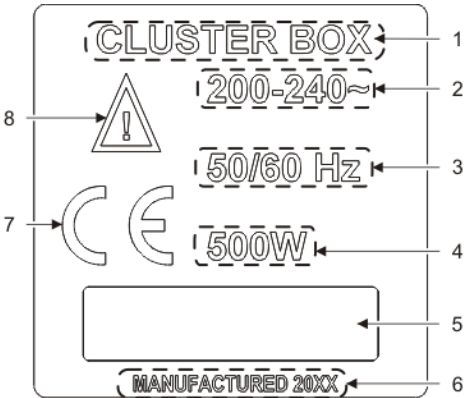
	Warning: Arc flash and shock hazard
	Warning: UPS voltage present when power is off
	Warning: UPS Disconnect
	Warning: Electrical interlock
	Danger: shock and arc flash explosion hazards

Arc Welding Warning

 **WARNING** - Potential equipment damage can occur if the vision equipment is not fully powered down prior to any arc welding performed on the line where the vision equipment is installed, specifically but not limited to our encoders.

Label Description - Intellispec

The following illustration shows an example label that you will find on the Intellispec system components.



- 1) Name of component. NOTE: The Chromapulse model is listed on the front panel of the module.
- 2) Voltage range in Volts AC

- 3) Frequency range in Hertz (Hz)
- 4) Maximum rated power in watts (W) with all accessories or plug-in modules connected
- 5) Serial number is listed in this box
- 6) Year of manufacture
- 7) Component certification
- 8) Risk of danger. Refer to accompanying documentation before use.

Warning Devices

The Pressco system has warning devices that indicate system failure or report excessive defects or warnings for your production line. These include an optional light tree, alarms and indicators on screen, and audible warnings (depending on system).

Alarms

User-programmable alarms allow you to set the duration of the lights in the optional light tree and the horn if certain criteria are met.

In addition to the light tree, an alarm button is displayed on screen when certain criteria are met. You can click the alarm button to clear the alarm(s) and see more detailed information about the alarm condition.

Light Tree

The optional light tree is mounted on a pole in a customer-specified location.



The light tree color segments represent each alarm or system condition. A color segment may appear for more than one alarm condition.

Residual Risk

The Pressco system has been designed to minimize any danger of personal injury. However, the system uses rejection devices to remove defective product from the production stream. Also, the electronics cabinets contain risk of shock if they are opened.

Observe the following safety warnings when operating the system or working near it:



WARNING - Potential for projectiles to strike persons and cause injury. Keep clear of reject devices.



WARNING - Sensitive electronics and High Voltages may be exposed. Keep Processor Cabinet/ Electrical Control Box door closed.

Intended Use

Type of Process - The Pressco system is intended to monitor container and other special manufacturing processes and identify non-conforming product.

Intended Use - The Pressco system is designed and constructed for use in an indoor industrial environment, always sheltered from the weather.

Space Required - The Pressco system and accompanying sensors must be installed in a place that will enable safe and easy installation, size changeover, user operation, and maintenance procedures.

Prohibited Use

 **WARNING** - If this instrument is not used as specified, the protection provided by the equipment could be impaired. This instrument must only be used in a normal condition (in which all means of protection are intact).

 **Important** - The Pressco system should NOT be used for any purpose other than specifically indicated in the section titled *"Intended Use" on the previous page*.

The following uses are not intended:



Use in an explosive environment



Use in a flammable environment



Use in a damp, moist, or wet environment, except where specifically indicated

Personal Protective Equipment

 **Important** - Always follow the safety requirements of your plant in addition to the recommendations below.

We recommend, at minimum, use of the following Personal Protective Equipment (PPE):



Protective clothing



Protective gloves



Protective ear plugs or headphones



Protective eye wear



Protective foot wear

Personnel Safety

The following rules are recommended to ensure the safety of personnel in charge of machine operation and maintenance.

During machine operation:

	Only one operator is needed to operate the machine. All others must keep at a safe distance.
	Operators must be familiar with all machinery connected to the Pressco equipment and know how to use emergency stop devices. Note: the emergency stop devices may not be connected directly to the Pressco equipment, but it is important to know how to use them.
	Before putting the Pressco system online, the operator must ensure that all safety devices used with all connected machinery are in place and operational. Do not operate with guards removed.
	The operator must maintain maximum focus on his work and be alert throughout his shift. If this is not the case, immediately inform the shift supervisor.

When carrying out maintenance or repair work:

	Disconnect master switch. For switch locations, refer to the Power Up and Power Down section.
	Before starting the machine, ensure that no person is close to the machine.
	If maintenance or repair requires the disconnection or removal of safety or protection systems, this operation must be supervised by authorized personnel who must ensure the prevention of personal injury or damage to the machine. All machine movements must be performed with limited speed and limited movements.
	Maintenance or repair work on electrical components must be carried out exclusively by authorized, trained personnel. When running tests with power connected, you must strictly comply with the rules provided.
	Personnel working on higher parts of a machine must wear a harness and hook it on to the structure and must always move with extreme caution.
	Never perform lubrication or maintenance procedures on mechanical parts with the machine running.

For your safety, do not:

-  Open safety guards during machine operation
-  Perform maintenance and repair while the system is running
-  Lean on the machine
-  Sit on the machine components

-  Use the machine for purposes other than those listed in this manual
-  Modify parts of the machine
-  Allow unqualified personnel to operate or perform maintenance procedures on the machine

Lifting Heavy Objects

 **CAUTION** - Some components are heavy. Take proper precautions to prevent personal injury or damage to equipment. If you are not capable of lifting the object alone, ask a capable person to help lift the object, or use a mechanical lifting device

The components do not have handles to lift the equipment. Be sure to:

- Lift equipment from the bottom - do not use wires, brackets, nor other protrusions
- Keep fingers away from sensor lenses to keep the equipment clean
- Proceed slowly

 **WARNING**- The Pressco cabinets must NOT be lifted by one person. Use a mechanical lifting device, and ask another person to assist you.

 Do not twist your body when moving the load. Instead take small steps with your feet turning until you are in the correct position.

To safely lift equipment:

1. Stand close to the load and center yourself over it with your feet shoulder width apart.
2. Tighten your abdominal muscles.
3. Keeping your back straight, bend your knees and squat down to the floor.
4. Get a good grasp on the load with both hands.
5. Keeping the load close to your body, use your leg muscles to stand up lifting the load off the floor. Your back should remain straight throughout lifting, using only the muscles in the legs to lift the load.
6. To place the load in the appropriate spot, bend at the knees using only your leg muscles to lower the load.

Authorized Users

Trained machine operators, mechanic and electrical maintenance staff, and plant managers are considered authorized users of the Pressco system. These users should carefully read the information contained in this manual. The plant manager must ensure that the safety recommendations included in this manual are observed.

 **WARNING** - Allowing workers who are unfamiliar with the production process to operate the Pressco system could result in hazard risk.

If you are unclear about any part of this manual, contact Pressco Technical Support.



Important - No worker should ever operate the system outside of his/ her own area of competence and responsibility.

Proper Operation: - Only one worker is to operate the system at any given time. The correct position for the operator is in front of the user interface monitor or control enclosure (if applicable).

Repairs: - Any repair on the system shall be carried out exclusively by Pressco Technology Inc. service personnel or by other service expressly authorized by Pressco Technology Inc.

Spare Parts Usage

The following restrictions apply to replacing parts:



WARNING - Using spare parts that are not designed to Pressco's specifications can compromise the safety and effectiveness of the Pressco system.

- The use of parts that are not within Pressco's design specifications is prohibited. This prohibition applies in particular when the parts involved contain or are connected with safety devices.
- Before resuming production, make sure all safety devices are in working order.

Pressco Technology Inc. shall not be liable in any way if any of the above-described directions are not complied with.

To obtain a spare parts list, contact the Spare Parts department at Pressco: SpareParts@pressco.com. Or call +1-440-498-2000 (Monday - Friday 8AM - 5PM Eastern time).

In addition, Pressco's technicians are available to help customers, in their own plant, to solve any problem that might arise during use and maintenance of the system.

Chapter 3 System Specifications

This instrument has been designed and tested in accordance with Publication EN61010-1 (2010) Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use and has been supplied in a safe condition. The instruction documentation contains information and warnings which must be followed by the user to ensure safe operation and to maintain the instrument in a safe condition.

Environmental Conditions

The Intellispec system is designed to be safe in the following environmental conditions:

Note: Please consult Pressco Technology Inc. if your environmental conditions are outside of those listed.

Condition	Specifications
Indoor/ outdoor use	Indoor use only
Altitude	Up to 2000 meters
Operating Temperature	5 °C to 50 °C
Storage Temperature	0 °C to 70 °C
Humidity	Maximum relative humidity 80 % for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 50 °C
Mains supply	Voltage fluctuations up to ± 10 % of the nominal voltage
Overvoltage protection rating	Transient overvoltage typically present on MAINS supply NOTE: the normal level of transient overvoltages is impulse withstand (overvoltage) category II of IEC 60364-4-443.
Rated pollution degree	This instrument is designed for use in Installation Category II and Pollution Degree 1 as per EN61010-1 and EN60664 respectively.



Warning - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Sound Pressure Level

The horn on the optional light tree has a maximum 105dB level at 1 meter distance in front of the horn. Use proper hearing protection as specified by your plant safety instructions.

Specifications - Intellispec Series 6

The following sections contain electrical specifications and measurements for components of the Intellispec Series 6 system. Your system contains only the components necessary for your application.

Electrical Specifications - Series 6

230 V: Control Interface Series 6 model 77253, 81134, and 81895

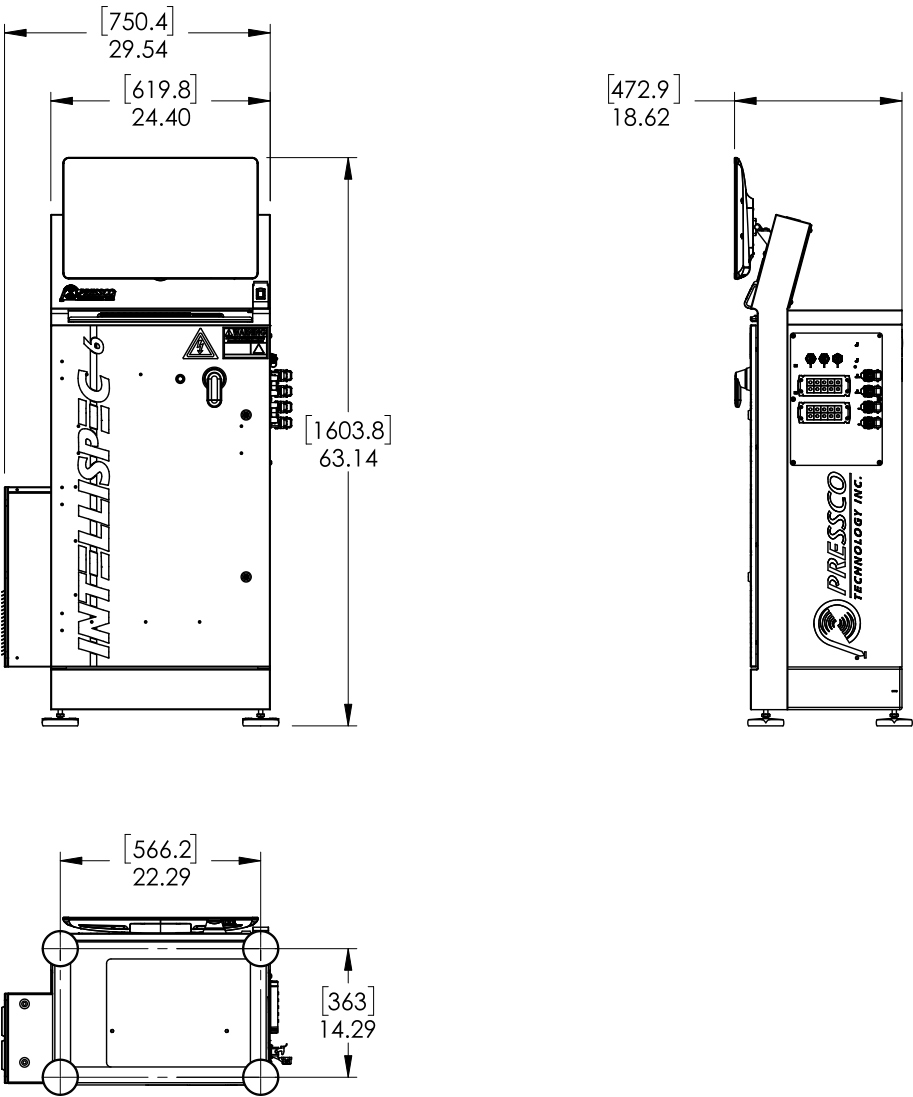
- Volts: 230VAC
- Current:
 - Inspection Module: 4A
 - Air Conditioner: 3.5A
- Frequency: 50/60Hz
- Phases: 1

120 V :Control Interface Series 6 models 77254, 81135, and 81896

- Volts: 115VAC
- Current:
 - Inspection Module: 6A
 - Air Conditioner: 7A
- Frequency: 50/60Hz
- Phases: 1

Dimensions - Series 6 Vision Processor Cabinet

The measurements are in inches. The numbers in brackets are in millimeters.



Chapter 3

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Chapter 4 EU Declarations of Conformity

Declaration of Conformity - Intellispec S6 System

Declaration	The listed product is in conformity with following Union harmonization legislation: Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility and with Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits. The Technical Documentation demonstrates the fulfillment of the essential requirements as set out in Annex I of the above Directive.
Manufacturer	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA This declaration of conformity is issued under the sole responsibility of the manufacturer.
Product Name	Intellispec Series 6
Referenced harmonised standards to which conformity is declared:	EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use — EMC requirements — Part 1: General requirements EN 55011:2016+A11:2020: Radiated / Conducted Emissions EN 61000-4-2:2009: ESD Immunity EN 61000-4-3:2006 + A1:2008 + A2:2010: Radiated RF Immunity EN 61000-4-4:2004 + A1:2010: EFT Burst Immunity EN 61000-4-5:2006: Surge Immunity EN 61000-4-6:2009: Conducted RF Immunity EN 61000-4-11:2004: Voltage Dips & Interruptions EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements 2011/65/EU Restriction of Hazardous Substances in Electronic Equipment
Place	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA

Signed: Fredrick F. Awig, VP of Engineering & Operations. Signed for and on behalf of Pressco Technology Inc.

Chapter 4

Signed for and on behalf of Pressco Technology Inc., 29200 Aurora Road, Cleveland, OH USA 44139:

A handwritten signature in black ink, appearing to read "Fredrick F. Awig", is written over a horizontal line.

March 29, 2021

Fredrick F. Awig,
VP, Engineering & Operations

Date

Date: 29 March 2021

Declaration of Conformity - 4 Camera CPX Inspection Module

Declaration	The machine detailed below, is in conformity with Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast). The product is in conformity with Directive 2014/30/EU based on test results referencing harmonized standards and the use of a Technical File in accordance with Article 14 of the Directive and fulfilment of the essential requirements set out in Annex I has been demonstrated.
Manufacturer	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA This declaration of conformity is issued under the sole responsibility of the manufacturer.
Product Name	4 Camera CPX Inspection Module
Technical File	EMC5383
Notified Body	The following EU Notified Body has assessed the Technical File for general construction, conformity procedures and EMC test rationale for in-situ testing to an approximation to the listed standards with respect to the essential protection requirements of Directive 2014/30/EU: Hursley EMC Services, Ltd., Notified Body 2635 Trafalgar Close, Chandler's Ford Eastleigh SO53 4BW, United Kingdom Assessment Certificate Number: 180898
Standards Used	EN 61000-6-2:2005: Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments. EN 55011:2016+A11:2020: Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement. 2011/65/EU: Restriction of Hazardous Substances in Electronic Equipment.
Place	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA

Signed for and on behalf of Pressco Technology Inc., 29200 Aurora Road, Cleveland, OH USA 44139:



1/27/21

Fredrick F. Awig,
VP, Engineering & Operations

Date

Signed: Fredrick F. Awig, VP of Engineering & Operations. Signed for and on behalf of Pressco Technology Inc.

Date: 27 January 2021

Declaration of Conformity - FHCP3X-EZ System (EMC)

Declaration	The machine detailed below, is in conformity with Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast).
Manufacturer	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA This declaration of conformity is issued under the sole responsibility of the manufacturer.
Product Name	FHCP3X, FHCP-1CAM, FHCP-2CAM
Standards Used (only major standards listed)	EN 61000-6-2:2005 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments. EN 55011:2016+A11:2020 Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement. 2011/65/EU Restriction of Hazardous Substances in Electronic Equipment.
Technical File	EMC5022
Notified Body	The following EU Notified Body has assessed the Technical File for general construction, conformity procedures and EMC test rationale for in-situ testing to an approximation to the listed standards with respect to the essential protection requirements of Directive 2014/30/EU: Hursley EMC Services, Ltd., Notified Body 2635 Trafalgar Close, Chandler's Ford Eastleigh SO53 4BW, United Kingdom
Assessment Certificate Number	180898
Means of Conformity	The product is in conformity with Directive 2014/30/EU based on test results referencing harmonized standards and the use of a Technical File in accordance with Article 14 of the Directive and fulfilment of the essential requirements set out in Annex I has been demonstrated.
Place	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA



Signed: Fredrick F. Awig, VP of Engineering & Operations. Signed for and on behalf of Pressco Technology Inc.

Date: 22 April 2021

Declaration of Conformity - High Speed Diverter (EMC)

Declaration	The machine detailed below, is in conformity with Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to electromagnetic compatibility (recast).
Manufacturer	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA This declaration of conformity is issued under the sole responsibility of the manufacturer.
Product Name	High Speed Diverter
Standards Used (only major standards listed)	EN 61000-6-2:2005 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments. EN 55011:2016+A11:2020 Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement. EN61800-3:2004+A1:2012 Adjustable speed electrical power drive systems – Part 3: EMC requirements and specific test methods. 2011/65/EU Restriction of Hazardous Substances in Electronic Equipment.
Technical File	EMC5076
Notified Body	The following EU Notified Body has assessed the Technical File for general construction, conformity procedures and EMC test rationale for in-situ testing to an approximation to the listed standards with respect to the essential protection requirements of Directive 2014/30/EU: Hursley EMC Services, Ltd., Notified Body 2635 Trafalgar Close, Chandler's Ford Eastleigh SO53 4BW, United Kingdom
Assessment Certificate Number	180898
Means of Conformity	The product is in conformity with Directive 2014/30/EU based on test results referencing harmonized standards and the use of a Technical File in accordance with Article 14 of the Directive and fulfilment of the essential requirements set out in Annex I has been demonstrated.
Place	Pressco Technology Inc. 29200 Aurora Road Cleveland, Ohio 44139-1847 USA



Signed: Fredrick F. Awig, VP of Engineering & Operations. Signed for and on behalf of Pressco Technology Inc.

Date: 22 April 2021

Chapter 5 Installation

This section contains information about installation requirements and preparations that need to be complete before installing the system.

Shipping and Handling

Pressco Technology Inc. ships unassembled components in packing cases designed to protect the contents during handling and from exposure to weather.

Unless otherwise specified in the contract with the machine order, the Customer shall supply Pressco Technology Inc. with the means and equipment necessary for the unloading, lifting, and handling of machine parts. Pressco Technology Inc. deems it important to have one of their technicians supervise the process of unloading, handling, and lifting the machine. The technician can give useful advice as to the logical sequence in which the components should be unpacked and positioned for ease of assembly.



WARNING - Only qualified personnel must be involved in the operation of unloading, handling, and lifting the machine. Pressco Technology Inc. shall not be liable for damage to components and/or personal injury resulting from the involvement of unauthorized personnel and/or failure to comply with the directions provided in this manual in relation to lifting and transport.



Important - The site supervisor will be responsible for ensuring that all the various mounting phases are carried out safely and in compliance with current regulations.

After the machine is delivered, check for any damage that might have occurred during shipping. In case of damage, contact Pressco Technology Inc.

In handling the machine, always keep it close to the ground.



We recommend using a forklift truck with adequate capacity and forks to suit the weight to be lifted (machine plus packaging).

Size (full Intellispec system)	152.4 cm x 124.46 cm x 152.4 cm (60 x 49 x 60 inches)
Weight (full Intellispec system)	453.592 kg (1000 lbs.)

Weight (Intellispec Vision Processor)	155 kg (340 lbs.)
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Recommendations Prior to Installation

Before the machine is installed, the Pressco installer, together with the Customer (or representative) shall check the following criteria in the environment where the machine is to be installed:

- Work required by contract for the installation of the machine has been carried out
- The plant layout drawing that describes where the machine will be installed is the final drawing agreed to by Pressco Technology Inc.
- The space and height required for installation are actually available

- Only the components included in the installation layout are present in the area where the machine is to be mounted. Ensure no machines or components have been added at a later stage that might hinder mounting or make it more difficult. Should this be the case, immediately contact Pressco's Project Engineering personnel to arrange a suitable solution to the problem.

We recommend the following prior to machine installation:

- Transport the machine in its packaging to the area where it will be installed to minimize possibility of damage
- Carefully remove the packaging material and check components for damage
- Check tightness of mechanical components, as they can loosen during transport
- Prepare the compressed air mains line. Before making final connections, ensure that the pipes are clean and free from any debris.

Utilities to be Supplied by Customer

The following utilities are required to operate the Pressco Intellispec system. Before making connection, make sure the utility matches the technical specifications. More than one connection of the utilities may be required depending on the number of modules installed. Refer to specific wiring diagrams.

Utility	Requirements
Air supply for rejection device	Pipe size must be such that there will be no pressure decrease during machine operation. Air must be dry and free of oil.
Electrical supply	Provide one each electrical socket to comply with: • User interface electrical specifications (use the specifications that apply to your system) • Integrated tunnel electrical specifications (if applicable) • Cluster box electrical specifications (if applicable)
Internet connection (optional)	Provide a shielded ethernet cable to use Pressco's remote support through the Internet.

Protective Earthing

This product must be grounded (earthed). If it should malfunction or break down, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.



DANGER - Improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or service technician if you are in doubt as to whether the product is properly grounded.

Cord Connected Equipment

The product will be equipped with a supply cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with local codes and ordinances.

Do not modify the plug provided with the product - if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

Cable Direct

This product must be connected to a grounded metal, permanent wiring system, or an equipment grounding conductor must be run with the circuit conductors and be connected to the equipment grounding terminal.

Electrical Connection

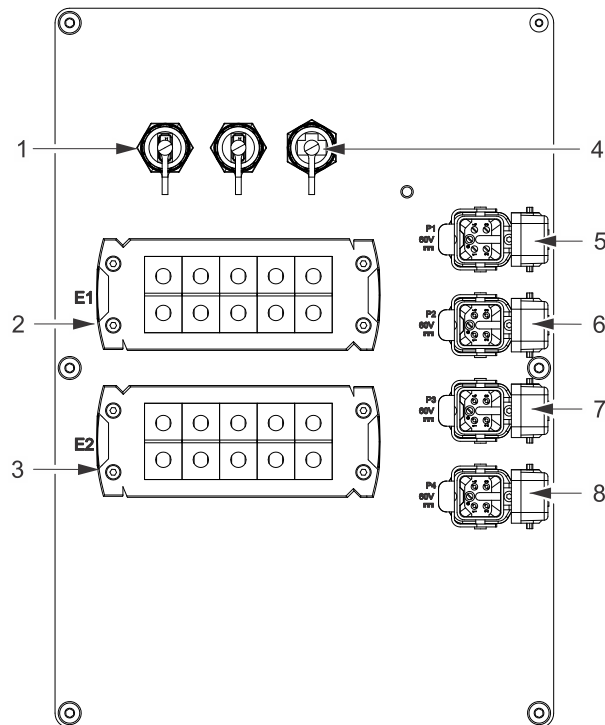
Make sure that the power outlet voltage matches the voltage required by the machine. Refer to the electrical specifications and wiring diagrams for your system.



WARNING - Power Switch is the power disconnect device. Do not position the equipment such that access to the disconnect switch is impaired. If not readily accessible (such as within a rack or mounting out of reach), an additional disconnect device should be installed that can isolate the Live and Neutral lines of the mains power supply, whilst leaving the protective earth intact.

External Connections

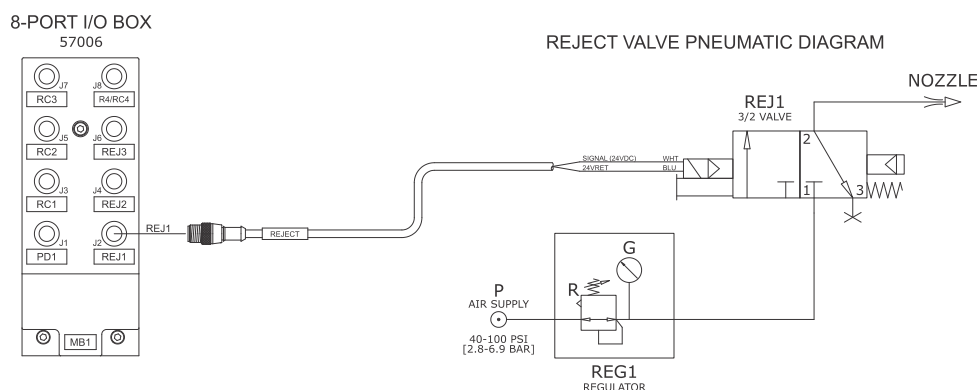
The connectors are on the side of the Intellispec Series 6 cabinet.



- 1) USB1 and USB2 - for data transfer
- 2) E1 block connector - inspection module connections
- 3) E2 block connector - inspection module connections
- 4) Ethernet connector
- 5-8) P1 - P4 connectors - 60 VDC out to inspection modules

Reject Valve Pneumatic Diagram

This diagram shows the reject device connection to the 8-port I/O box. This is for Intellispec systems.



Installation

Pressco Technology Inc. recommends that the machine be installed and assembled by Pressco's specialized technicians. This is of vital importance for correct machine operation.

 **WARNING** - Pressco Technology Inc. shall not be liable in case of failures or damage to property and/or personal injury resulting from or connected with assembly if this has been carried out by unauthorized personnel, or is not in compliance with the indications given in this manual.

To carry out production and cleaning/ servicing operations, it is important for the machine to have a minimum amount of space all around and away from walls.

Ventilation

Place the Pressco Intellispec components in a position with adequate ventilation to allow proper air flow through the air filters.

Component	Spacing
User Interface	Leave 1 meter [39 inches] clear around machine
Cluster box (not used on all systems)	Leave 100 mm clear in front of the fan and vent

Stability of User Interface

Adjust the feet to level the user interface and ensure stability. Proper leveling can help ensure proper operation. Also refer to the directives in the **"Personnel Safety"** on page 13 section.

Commissioning

Before placing the machine into operation, make sure the following checks are completed:

Completed	Yes	No
Positioning and leveling of the unit		
Connection of compressed air line to connection points		
Connection of power supply to vision processor cabinet		
Connection of power supply to cluster box (if applicable)		
Connection of power supply to integrated inspection module(s) if applicable		
Proper wiring from user interface cabinet to sensor module(s) and cluster box (if applicable) using the wiring diagrams		

Chapter 6 Software Overview

This section describes the regions of the user interface and how to navigate through the software. It also describes how to select items and how to use the user interface buttons.

How To Select Menu Items

Use the touch pad to select, interact, and change active objects on the screen. The touch pad will be required for all inspection editing tasks.



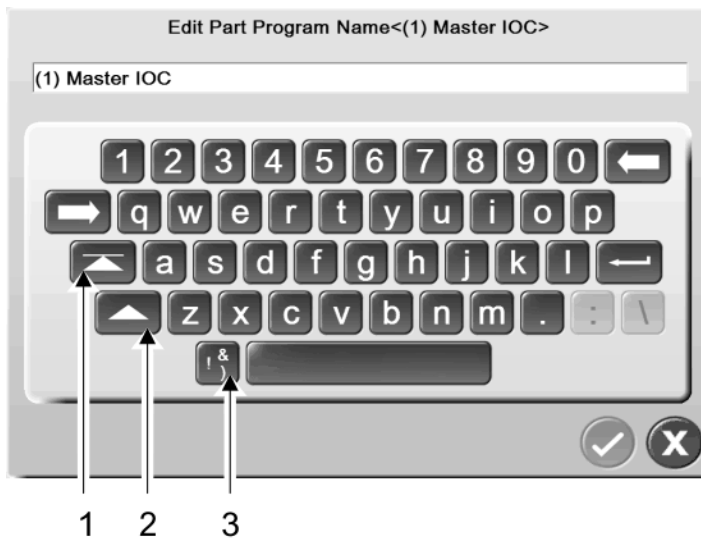
- 1 - **Touch pad** - Select items on the screen, draw inspection regions, clear alarms, etc.
- 2 - **Left-click** - Use the left button to select and activate objects on the screen.
- 3 - **Right-click** - Use the right button to call up a context-sensitive menu related to the area or object clicked.

Action	Result
1 - Point (move pointer with the touch pad)	Display Tool Tip when hovered over active object
2 - Click (Left-click)	A click initiates various actions. Nothing happens when the pointer is clicked on a disabled object.
2,2 - Double-click	A double-click initiates various actions. For example, edit an inspection.
3 - Right-click	Display a context-sensitive menu when you click on an enabled object. The context-sensitive menu often contains functions that are also available in a menu bar or other screens. (Example, add a point to a polygon)
1-2 - Drag (hold the left button while moving another finger across the touch pad)	Examples: move a selected Region of Interest (ROI) around an image or move an inspection in a Tree View to change the order of execution.

On Screen Keyboard (OSK)

Keyboards will be displayed depending on what kind of input is needed. Other keys are available, depending on your language. Keys may be grayed out if not applicable to the current operation.

Alphanumeric keyboard



- 1) Shift lock button - capitalizes all letters until you press this button again.
- 2) Shift button - capitalizes one letter, then returns to uncapitalized letters automatically.
- 3) Symbols button - provides additional keys:

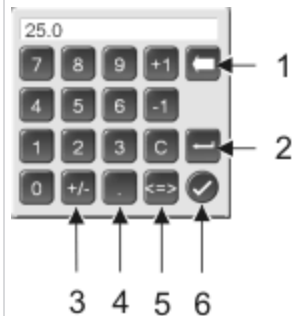


Latin key: This key, available in some languages, allows you to enter Latin characters. This is required for entering some system-level items, including file extensions.

Numeric keyboard

The numeric keyboard is displayed when the input field requires a numeric entry. Most of the buttons are self-explanatory. Additional buttons are described below.

Note: some buttons are not displayed if they are not appropriate for that field.



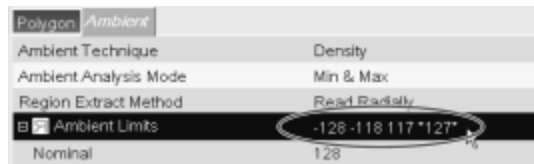
1) Backspace - removes a digit

2) Enter - populates the field in the Intellispec screen without closing the keyboard. This is useful if you want to test a value and see the results of the change immediately.

3) [+/-] makes the number positive or negative

4) [.] available only if a decimal number is valid in the input field

5) [<=>] cycles to the next limit of the parameter. If the parameter has more than two limits, then asterisks will surround the selected value in the menu.



6) the OK button accepts your changes and closes the numeric keypad

4 Software Screens

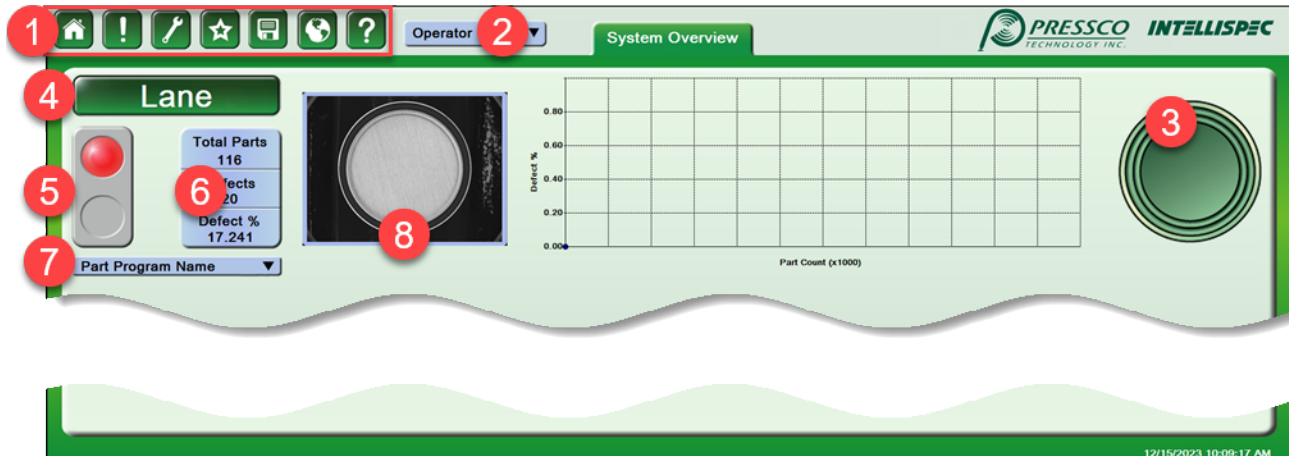
This section describes the four main types of screens in the Intellispec software.

System Overview screen



Access the System Overview screen by selecting the Home icon.

Note: your system may have multiple lanes. This example shows one lane.



- 1) "Menu Toolbar" on page 39
- 2) Log in/ Log out
- 3) Walk-by graphic
- 4) Go to Lane Overview
- 5) Online/ Offline
- 6) Lane Statistics
- 7) Part Program
- 8) Heartbeat Image

Lane Overview Screen

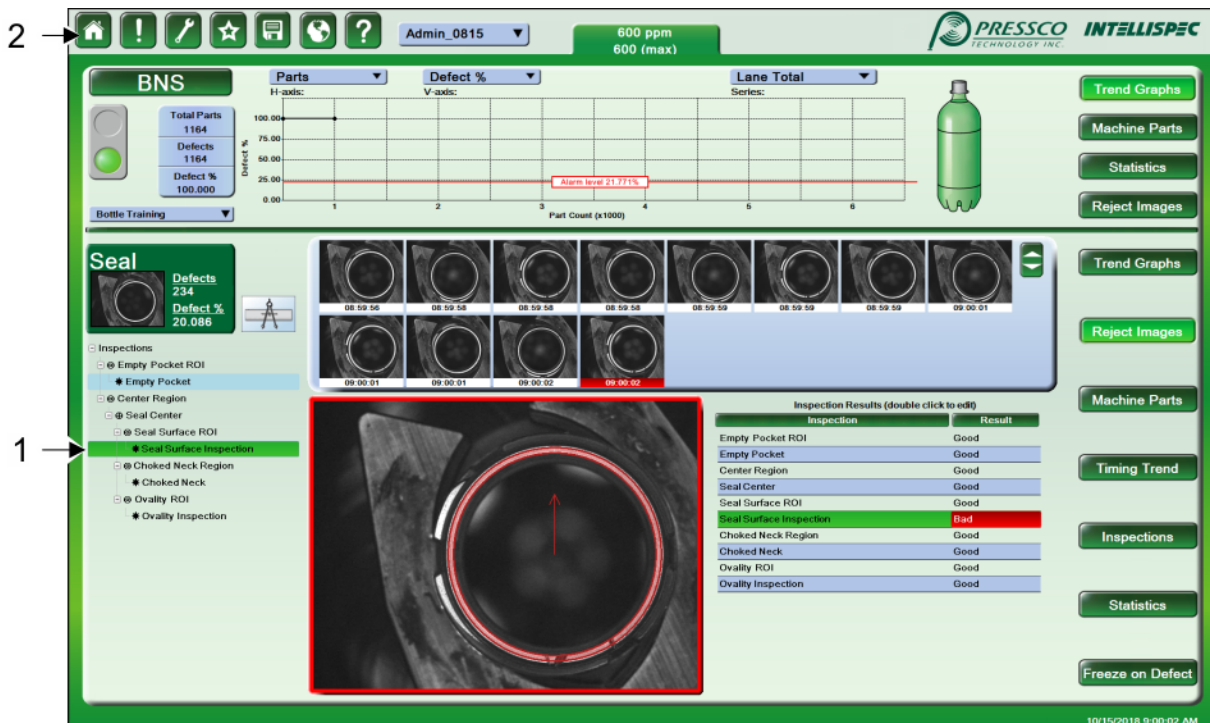
Select a "Lane" button to access the Lane Overview screen.



- 1) Select the sensor button to toggle to detailed Sensor View and back
- 2) Switch to System Overview

Sensor Overview Screen

Select a sensor or camera button (from Lane Overview) to access the Sensor Overview screen.

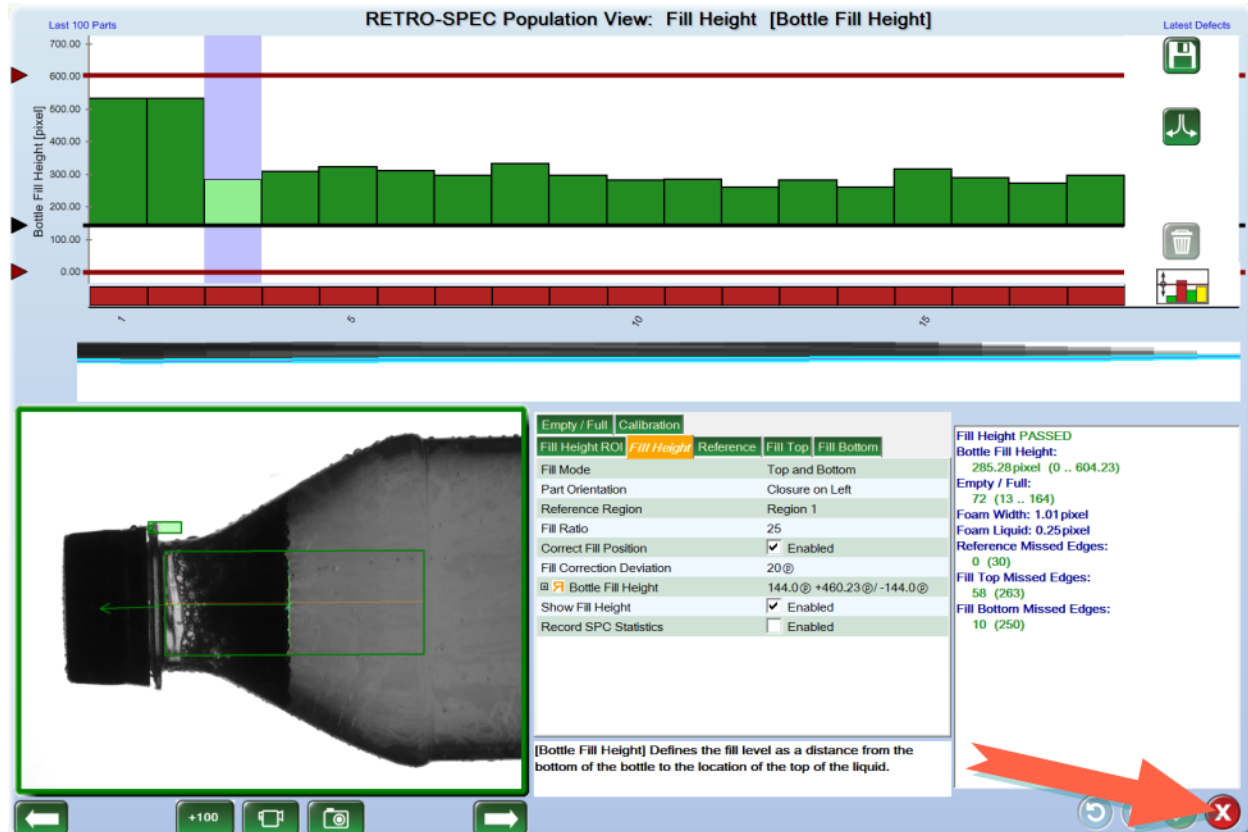


- 1) Double-click to open Inspection View
- 2) Switch to System Overview

Inspection Overview Screen

Double-click an inspection name in the inspection tree to access the Inspection Overview screen. This is the screen where you may adjust inspection parameters (if you have user permission).

Two different views are available: "Retro-Spec Population View Graph" and "Retro-Spec Part View Graph." Double-click on the upper graph to switch between them.



Close the Inspection View to switch to System Overview or Sensor Overview

Log in and log out

To log in, use either method:

- A. **Log In** Select the Log In button. Select your user name, and enter your password.
- B. With the optional biometric sensor: Press your finger to the sensor. The system logs you in. If the system fails to recognize your identity after three attempts, then log in through the log in dialog box.

To log out:

- A.  Select the button with your name, then select the Log Out button.
- B. With the optional biometric sensor: Press your finger to the sensor. The system logs you out.

Note: When another user logs in, the system automatically logs you out.

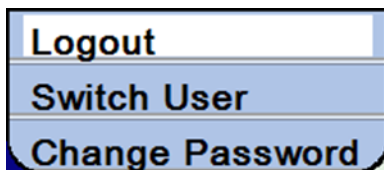
Log In menu

To ensure that only authorized users perform certain changes to the system, users are required to log in.* Some of these menu items are available to advanced users only.

To view the Log In menu:

 Select the Log In button and enter your password. The text on the button changes to indicate who is logged in.

 Select the Log In button again. The popup menu appears.



- 1) Logout
- 2) Switch user
- 3) **Change Password** - Change only your password

Online - Offline

The stoplight is the online/offline indicator for each lane.



- Red = offline
- Green = online
- Amber = smart offline (processing parts in the queue when the system goes off-line).

To switch from the online to offline mode, or vice versa, click the stoplight.

Lanes can be put online or offline independently. If multiple lanes are configured, then one lane can be offline while another is online.

Note: you may need user permissions to put the lane online or offline

Part Changeover

When changing parts to inspect, you only need to change the part program (if you have a part program already set up for the newly inspected part type).

This will load the proper inspections, lighting, and guide rail settings, if applicable (as long as these were previously set).

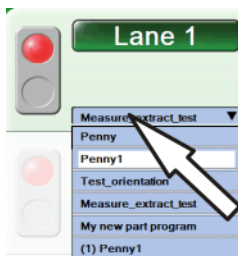
Note: Some menu items are available to advanced users only

What you need:

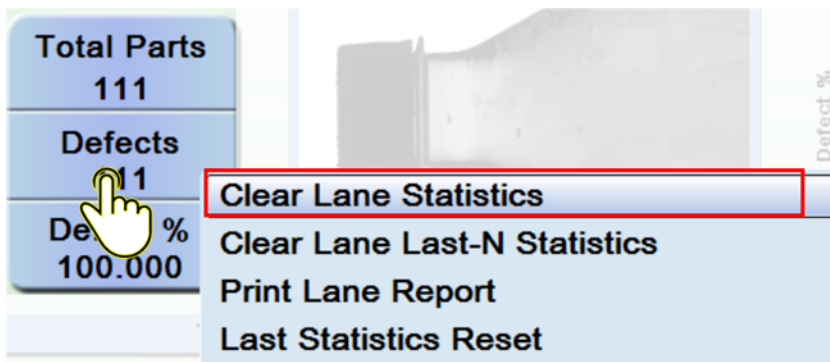
User permission to Switch Part Program

To change parts:

1. Log in.
2. Click the part drop-down menu.



3. Click the name of the new part to inspect. The new part program is loaded on the Intellispec.
4. Click the statistics panel and select Clear Lane Statistics, to begin counting statistics for the new production run.



5. Put the lane online to begin inspecting new parts.

Lane-specific information is contained in each Part Program. Everything you set up have previously set up is stored: camera information, lighting information, calibration information, and inspections.

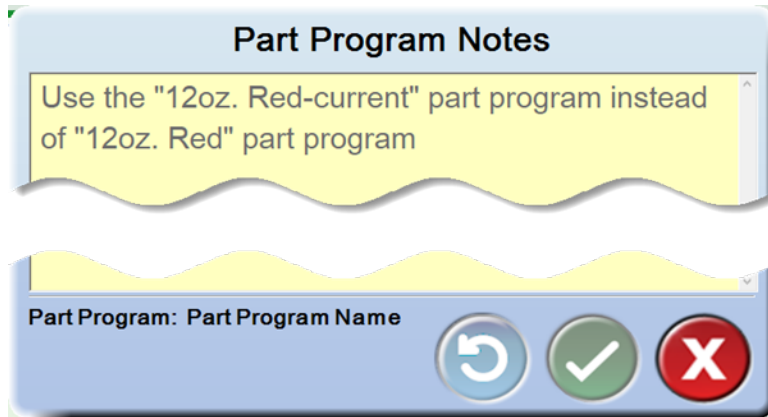
Part Program Notes

If your Administrator or Supervisor has added notes about which part program to use, or setup information that they have documented you will see it here.



To access Part Program Notes, from Lane or Sensor Overview mode, go to **Tools | Part Setup | Part Program Notes**.

This example shows a note telling the operator to "Use the 12oz. Red-current" part program instead of "12oz. Red" part program.



Menu Toolbar



Note: some menu items change, depending whether you are in System Overview mode or Lane/Sensor Overview mode

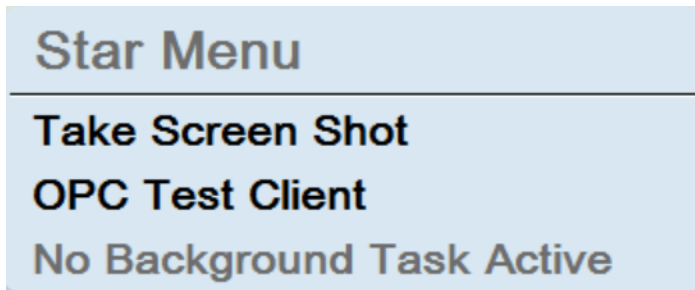
- 1) **Home** - Go to the System Overview Screen
- 2) **Alarms** - Clear, view, and set alarms
- 3) **Tools menu** - Configure system settings, reports, hardware, part tracking, rejectors, part setup, and more
- 4) **Star menu** - Take screen shots and manage background tasks, and launch the OPC Client (if installed)
- 5) **Back Up and Restore Menu** - Create a support package, restore the system from a support package, and launch Windows Explorer
- 6) **Language** - Select the language to display the Intellispec software, from the available options
- 7) **Help** - Access the help documents, remote support, and determine software version

Star Menu



Select the Star button from the toolbar to see this menu.

Note: Some menu items are only available to advanced level users.



This menu allows you to access the following utilities:

"Take Screen Shot" below

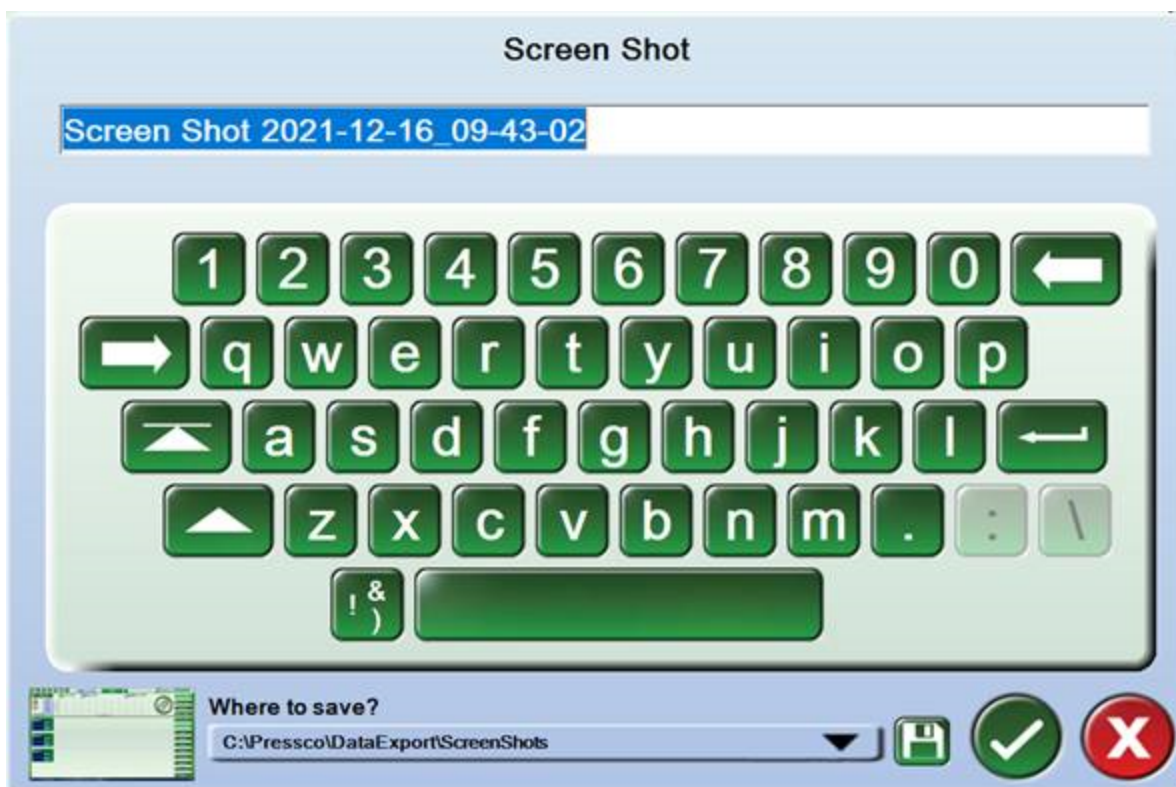
The Intellispec OPC Test Client - only with the optional OPC package installed. Use this menu to open the OPC client when the system is online.

Take Screen Shot

Capture an Intellispec screen image. This is different from saving individual part images through the Save Image function. A screen shot is useful to illustrate a problem to technical support, capture error messages, or to capture settings for future setup.

To capture the current full Intellispec screen:

1. Select the Star button | Take Screen Shot. An onscreen keyboard is displayed with a default image name.



2. Re-name the screen shot if desired.
3.  If you want to save the image to a location other than the default location, select the Save icon. You can browse to a different location, such as a USB drive.
4. Select OK to save the image. The image is saved as a Portable Network Graphic (.png) file to the location displayed under "Where to save?"

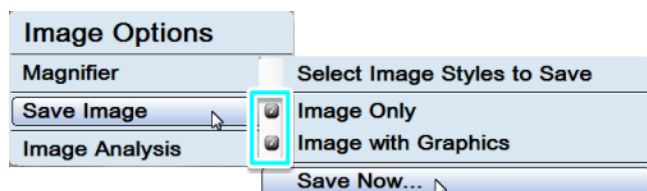
Saving Images

Save Images

There are several ways to save an image within the Intellispec system.

Save any image:

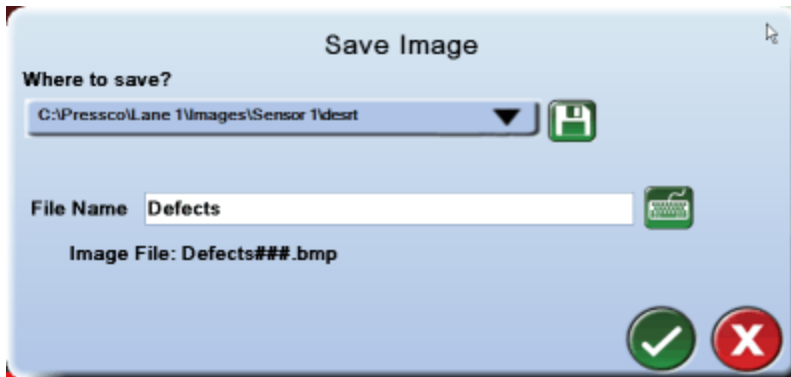
In most parts of the system, right-click over any image. Follow the instructions on screen. This is useful to save images to include with a Support Package.



Checked = enabled. Then click Save Now...

- **Image Only** - bitmap (.bmp) image with no graphics. Note: only **bitmap** images can be loaded back into the Intellispec.
- **Image with Graphics** - portable network graphic (.png) image with inspection graphics

The image is saved to the default location shown, unless you specify a different location. A default file name is provided for you. Select the keyboard icon to rename the image.



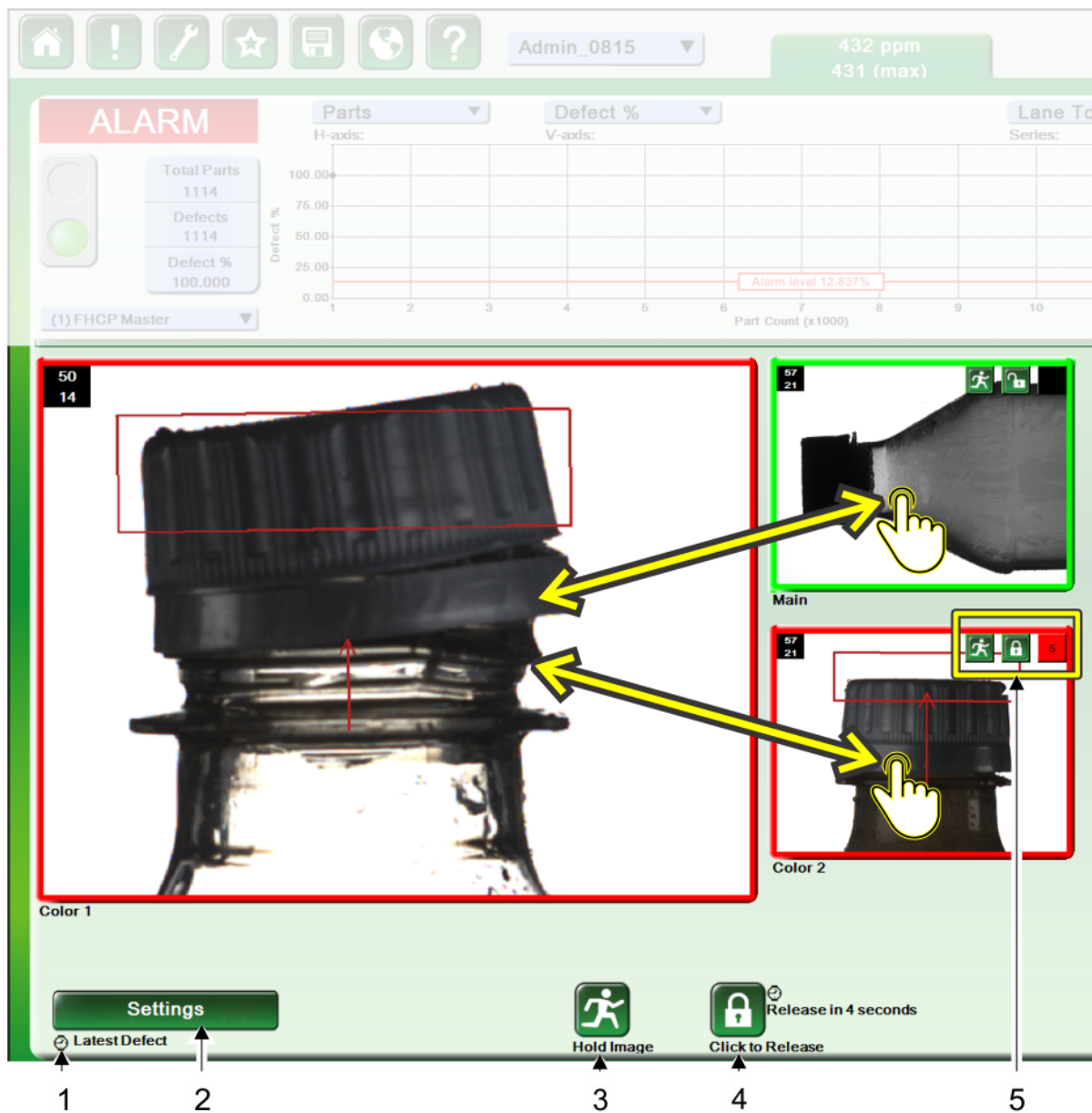
Freeze on Defect



Freeze on Defect allows you to automatically freeze an image when a lane is online. Freeze on Defect has two views: Multi Sensor View and Single Sensor View.

Multi Sensor View

This is accessed from Lane Overview Screen.



1		Optional Timed Release feature
2	Settings	Go to "Freeze on Defect Setup Menu" on page 46
3		Hold an image
3		Held image
4		Locked image. Select this button to release an image.
4		Unlocked image.
5	These symbols appear only on the smaller images, when Side-by-	

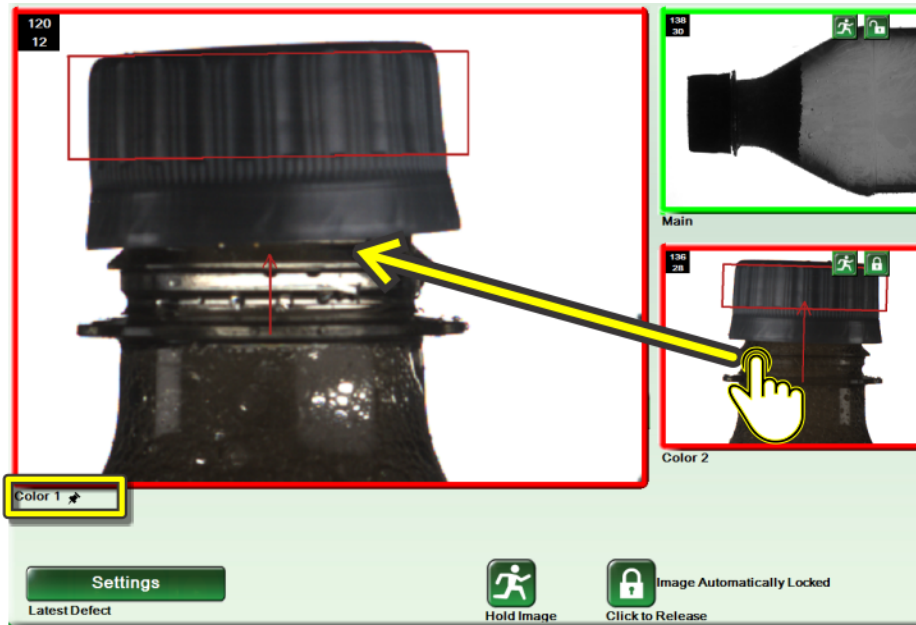
Side Locked Images = Latest Sensor Image in the Settings menu (Freeze on Defect Setup menu). The number in the upper right corner of the small image is the countdown timer (when Timed Release is used). The large image does not show these buttons; holding the image is controlled by the buttons at the bottom of the screen.

Right-click over any image to use the "Freeze on Defect Options Menu" on page 47

Pinned Image

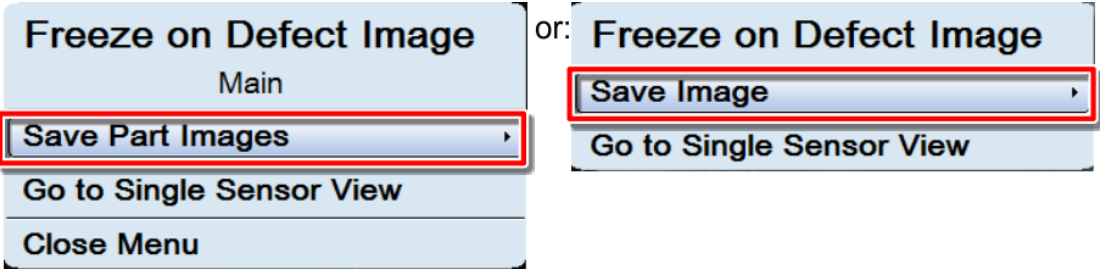
In Multiple Sensor View, a view can be pinned to the large image when "Automatically switch to the latest locked image" is enabled. This allows you to work with the image for 10 seconds before it gets replaced by another image.

When you select one of the smaller images, that image gets moved to the large image, and is pinned there temporarily by the system. A push pin icon is displayed below the large image.

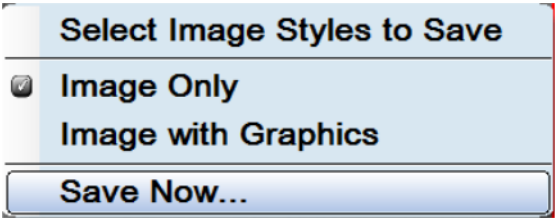


To save an image:

1.  Select the Hold Image button.
2. Right-click over the image.



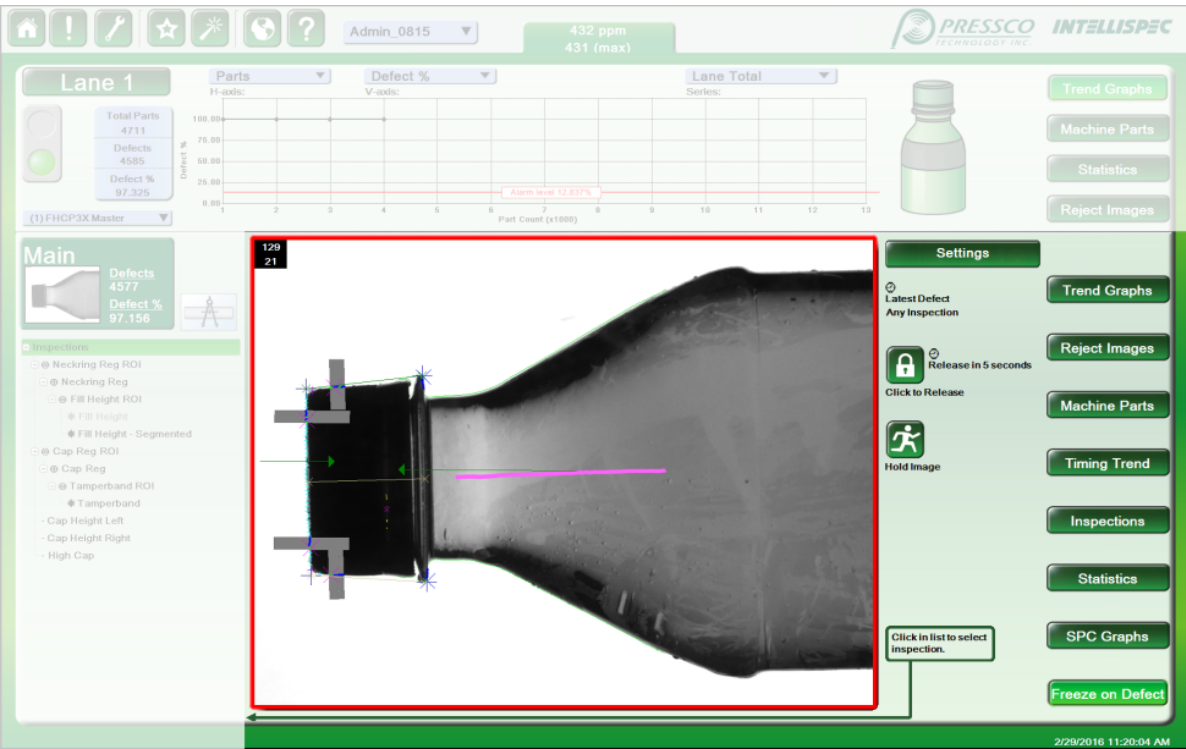
3. Select Save Part Images or Save Images (depending what is shown on screen).
4. Select Image Only or Image with Graphics.



5. Select Save Now... and follow the instructions on screen.

Single Sensor View

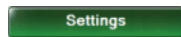
Enter this view from the Sensor Overview Screen. Select the inspection to freeze from the inspection tree.



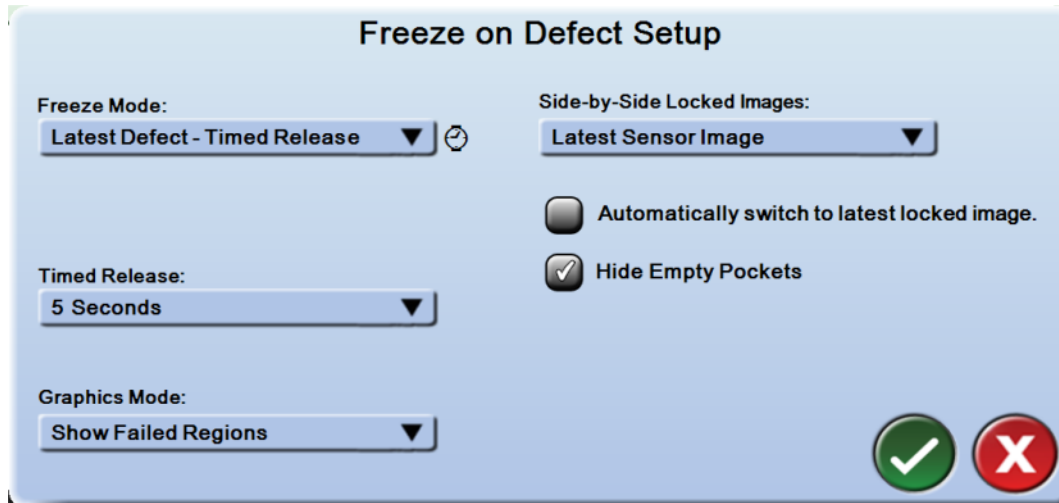
To exit Freeze on Defect:

Select another button on the right side of the screen (example: Trend Graphs).

Freeze on Defect Setup Menu



Select the Settings button from Freeze on Defect mode. Menu options change based on where you entered from.



Freeze Mode

Manual Lock Only - Do not automatically hold an image. Images will be updated continuously, except if you select the Hold button.

Latest Defect - Freeze the last rejected part. Each subsequent failing part will freeze until another part fails.

Latest Defect - Timed Release - Hold the last defective image for a number of seconds (set by Timed Release). If another defect occurs during the countdown, that image is frozen and the Timed Release countdown resets.

First Defect - Freeze the image of the first defective part after going online. The image freezes until you release it or change Freeze Mode.

First Good - Freeze the image of the first good part after going online. The image freezes until you release it or change Freeze Mode.

Machine Part - Freeze the next part image correlated to the selected machine part. It freezes until the next correlated image becomes available and is replaced by the new image. Use the Select Machine Part button to select the machine part.

Machine Part - Timed Release - Freeze the next part image correlated to the selected machine part. It remains on screen for the specified time, or until the next correlated image becomes available, whichever comes first. Use the Timed Release settings to set the display time.

Timed Release - Set the display time. When the time expires, a new image is displayed.

Graphics Mode - Select which inspection graphics to display.

Hide Empty Pockets - If enabled: If an inspection detected an Empty Pocket, then that blank image will not be displayed.

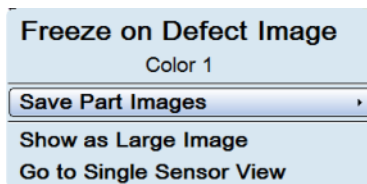
The following only apply if you are in Multi Sensor View:

Side-by-Side Locked Images - Same Part - The images displayed are all the same part. Latest Sensor Image - Displays the last inspected images. If your cameras are located far apart, the images may be different parts. This mode is usually used when your cameras are close together, such as in a BNS application. If your system uses Machine Part Correlation, you can "Show Correlation Values in Images," so that you can see which image is associated with each machine part.

Automatically switch to latest locked image - This switches the image that most recently met the freeze frame conditions to the large image.

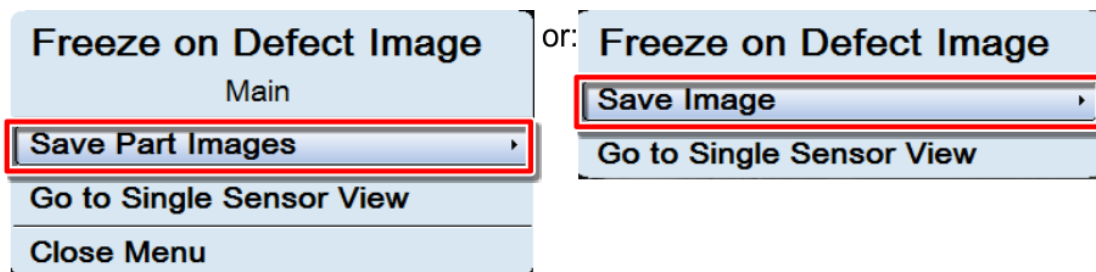
Freeze on Defect Options Menu

Select or right-click over one of the images from Freeze on Defect mode to see the menu.

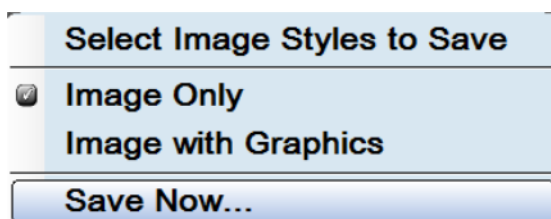


To save an image:

1.  Select the Hold Image button.
2. Right-click over the image.



3. Select Save Part Images or Save Images (depending what is shown on screen).
4. Select Image Only or Image with Graphics.



5. Select Save Now... and follow the instructions on screen.

Show as Large Image - [Available from Multi Sensor View, when you right-click over a smaller image] Display the current image as the large image.

Go to Single Sensor View - Go back to Sensor Overview mode and display the Reject Images screen for the selected sensor.

Reject Images

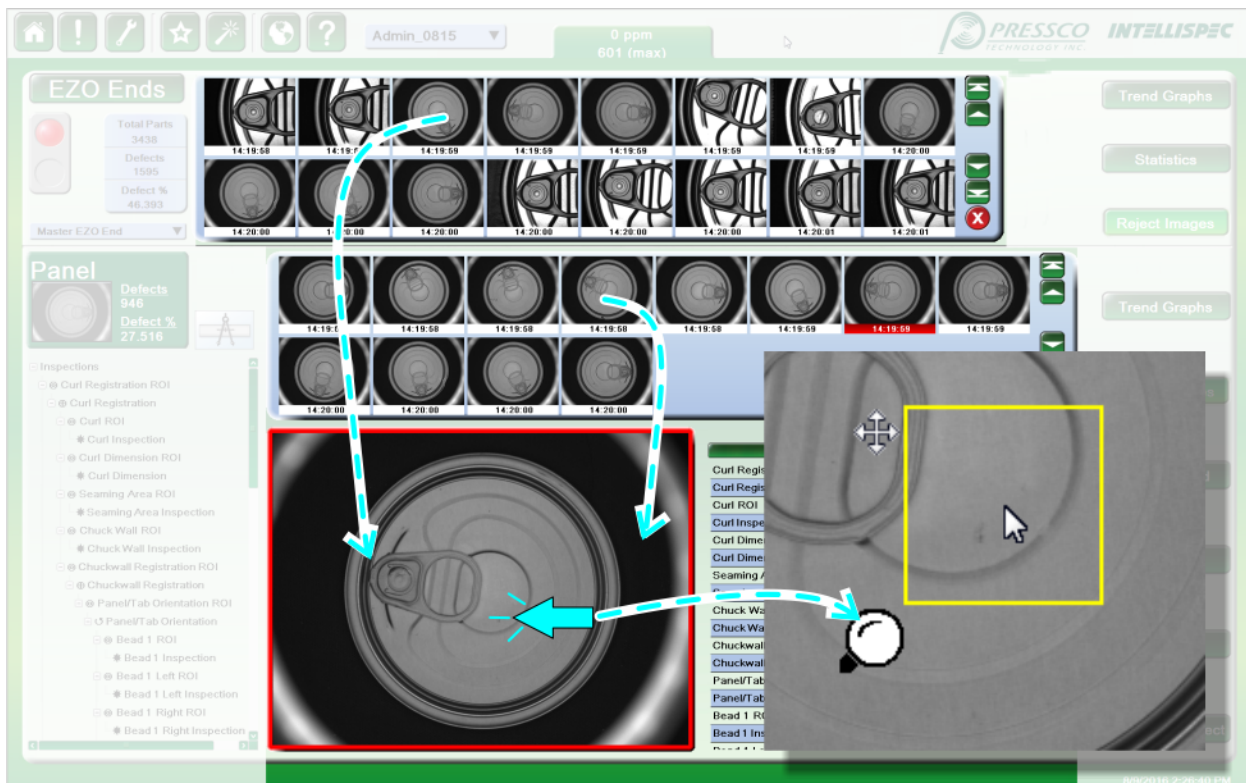
Reject Images

Reject Images are images from the last 100 defects from a sensor (or all sensors for Lane Overview mode). Select a Reject Images button. Note: there are buttons for Lane and Sensor levels.

Lane Reject Images - show failed images from different sensors.

Sensor Reject Images - show failed images from that sensor only.

Select an image from the Reject Images in either the Lane Overview or Sensor Overview area to see that image in the lower screen. Click on an area of the large image to see a magnified image. This is helpful to see small defects.



Clear All Defect Images



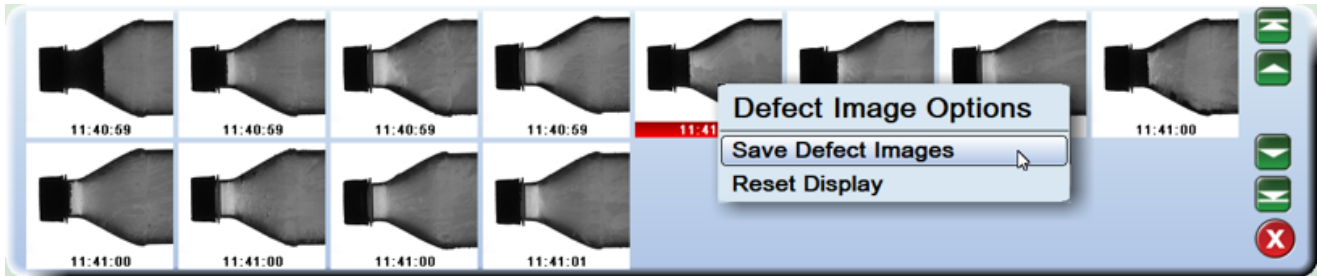
To remove the reject (defect) images from the screen, select the **Tools** button | **Part Setup** | **Clear all Defect Images**.

Save Reject Images

Right-click to save up to 100 (*.bmp) images from defective parts. The lane can be online or offline.

Reject Images

1. Select the Reject Images button from the right side of the screen.
2. Right-click over one of the reject images and select Save Defect Images.
3. The system will prompt you where to save the images. Select a location, or use the default location as displayed.
4. Select the OK button to save the images. The defective images from that sensor are saved to the location you chose in step 3.



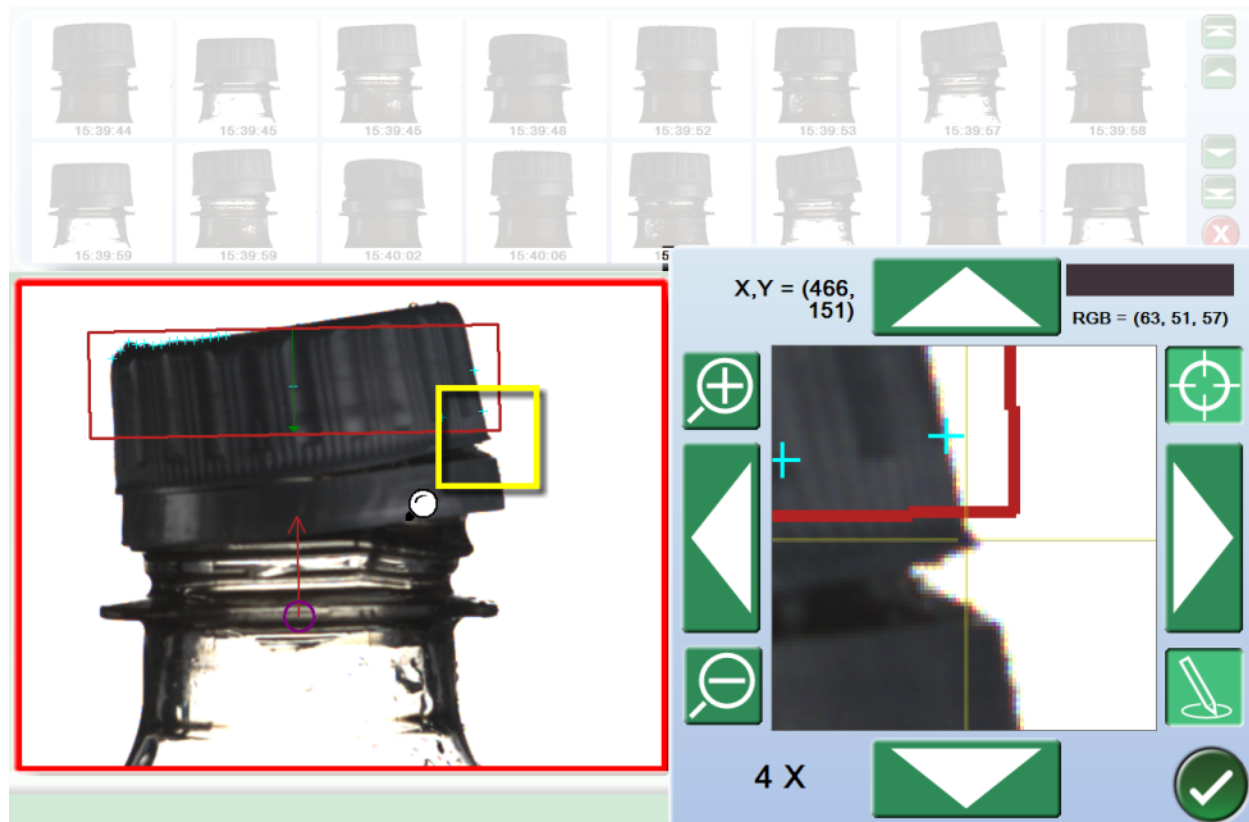
Reset Display - Resets the reject image display to show all failed parts, instead of images from only one part or one inspection.

Save Individual Reject Images

Select any thumbnail image in Sensor Overview mode and right-click to save it.

1. Select the Reject Images button on the right side of the screen.
2. Select one of the images to save. The image will be displayed at the bottom of the screen.
3. Right-click over the large image, select Save Image and select the image style to save.

Click on an image in the lower part of the Intellispec screen to open the Image Magnifier. The magnifier appears as a pop up box with multiple buttons to zoom in, zoom out, and navigate.



To use the magnifier:

When you first open the tool, the yellow box area over the image is magnified. This moves when you move the cursor on screen. To move the magnified area independent of the cursor, right-click over the image.



The arrow buttons become available.



Select the target button to display or remove crosshairs on the magnified image. The pixel at the center of the crosshairs is where the RGB values are measured.

Graphs

Several graphs are available on the user interface to help you view inspection trends. This section discusses the buttons on the right side of the screen in the Lane Overview and Sensor Overview modes.

Walk-by Graphic Overview



The Walk-by Graphic is a graphic representation of a part so that you can quickly identify which area of the part is failing. It is called Walk By because you can quickly walk by the Intellispec and look at the graphic to determine the status of inspection:

- Green = passing parts
- Yellow = warning. The spoilage rate is approaching, but has not yet reached a critical level. You can make changes to the manufacturing process before the failure rate gets too high.
- Red = failing parts

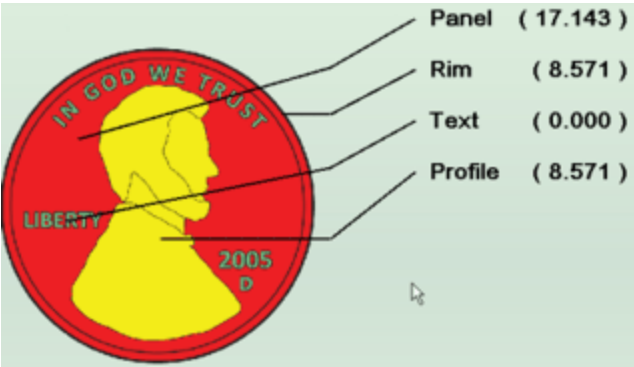
There are two Walk By Graphics:

- A small Walk By Graphic is displayed in System Overview, Lane Overview, and Sensor Overview modes
- A large Walk By Graphic can be displayed in Lane Overview mode

To see the large Walk By Graphic:

1.  Select a Lane button.
2.  Select the Walk By button on the right side of the screen.

The large Walk By Graphic displays the group names, pointing to the appropriate areas on the part. It also displays the defect percentage for each of those groups, from inspection results.



To remove the large Walk By Graphic from the screen:

Select another button on the right side of the screen, such as Reject Images.

Using the Walk-by Graphic

View inspection information by selecting on the areas of the graphic. The example below shows:

- The Panel group was selected - all the inspections for Panel are displayed in the table
- The Panel area in the Walk By Graphic is red - The average defect % for the group of inspections exceeds the failure limit from the Walk By setup

Lane 1

Total Parts
312998

Defects
62599

Defect %
20.000

Penny1

Show: Groups

Detail: Panel

Inspection	Total	Defects	Defect %	Last N	Last N %
Polygon	312615	26794	8.571	78	7.800
Contrast	312615	44658	14.285	130	13.000
Polygon	312615	26794	8.571	78	7.800
Contrast	312616	35727	11.428	105	10.500
Polygon	312616	26795	8.571	79	7.900
Contrast	312616	44659	14.286	131	13.100

Double-click an inspection from the table to open and edit that inspection. Note: Some menu items are only available to advanced level users.

Sort Data in Graphs

Trend Graphs

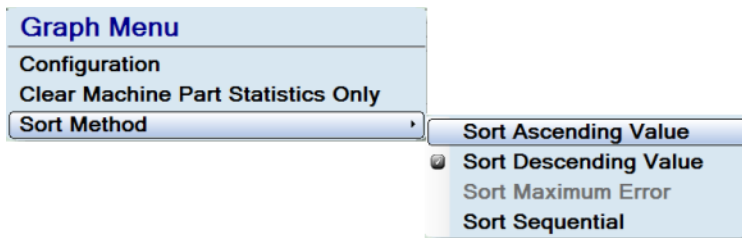
 or

Machine Parts

Change the order of the displayed data in the Trend Graphs or Machine Part Graphs (if configured).

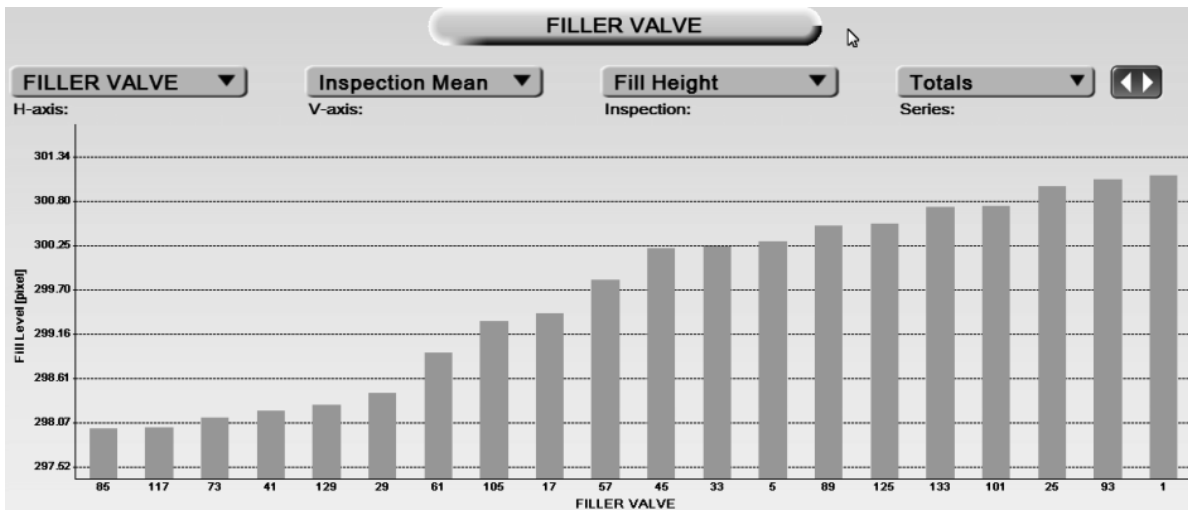
Note: when you change sorting order, it affects the Trend Graphs or Machine Part Graphs in the upper and lower screens. Other graphs are not affected.

To sort the graph data: Right-click over a graph | select Sort Method | select an option.



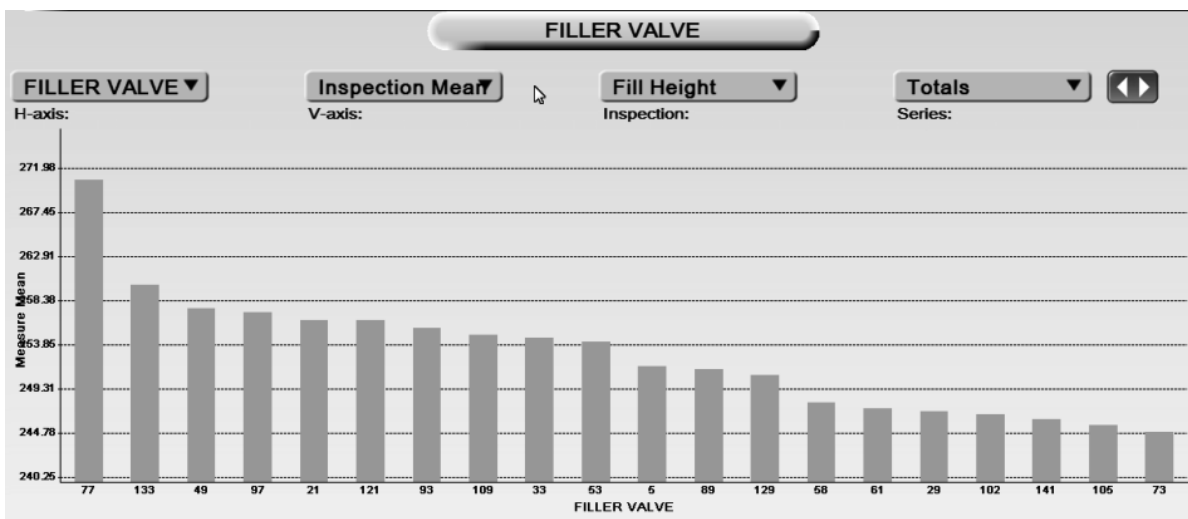
Sort Ascending Value

Sort from low to high result. In the example below, the machine part with the highest number of defects is shown on the right side of the graph.



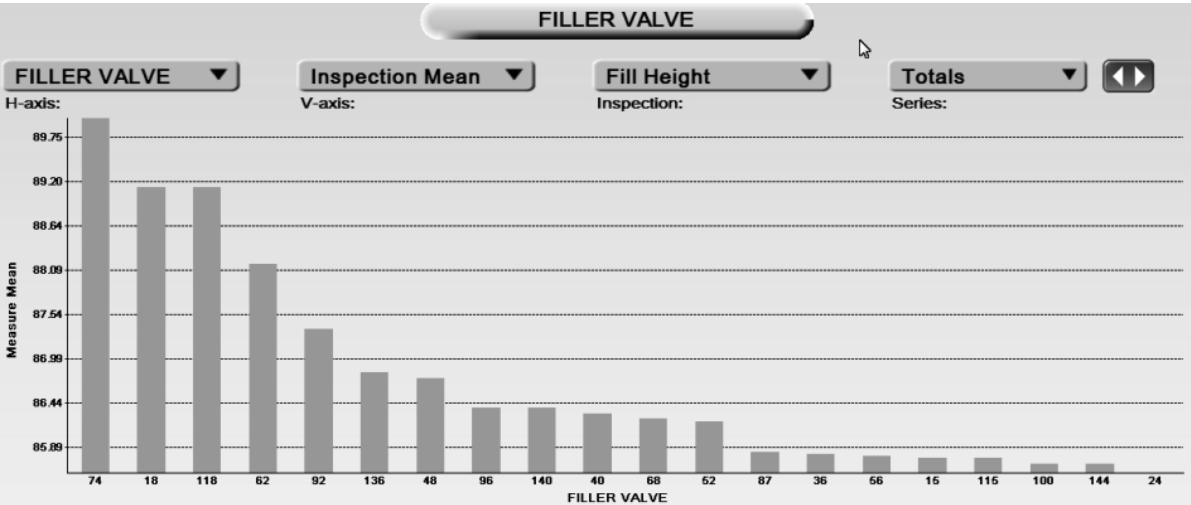
Sort Descending Value

Sort from high to low result. In the example below, the machine part with the highest number of defects is shown on the left side of the graph.



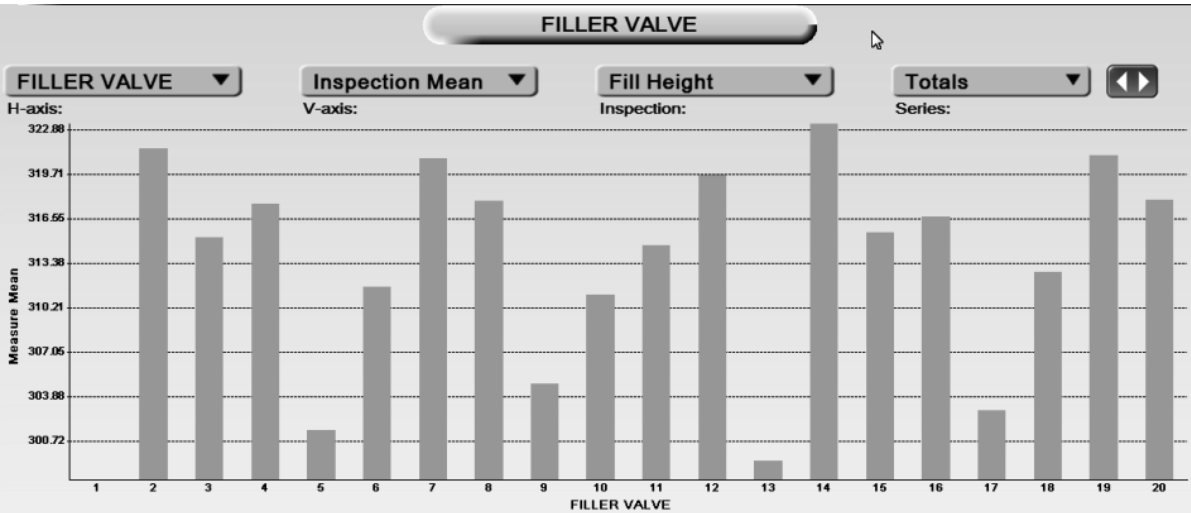
Sort Maximum Error

[Available when "Record SPC Statistics" is enabled for an inspection, Totals is selected for the graph Series, and Inspection Mean is selected for V-Axis] Sort the data by machine part where the highest peak shows the furthest value from nominal, as an absolute value.



Sort Sequential

Display an ordered list of machine parts.

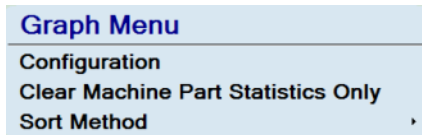


Clear Machine Part Statistics

Trend Graphs or **Machine Parts** Clear the statistics for the machine parts only, if desired [only if correlation is enabled].

To clear Machine Part statistics:

1. Right-click over a trend graph or machine part graph.



2. Select Clear Machine Part Statistics Only.

Scroll in Graphs



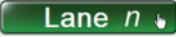
When the data falls outside of the current viewing range (example, time) a scroll button becomes available.

The data goes back to when the system was powered up, or 2880 data points, whichever is more recent. The trend data is reset when the system is restarted.

- In a time-based graph, if the graph time per update is set to one minute, then the data goes back 48 hours
- In a part-based graph, if parts per update is set at 1000 parts, then the data goes back 2,880,000 parts

Trend Graphs

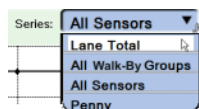
To view the Lane trend graphs:

1.  Select a lane.
2.  Select a Trend Graphs button on the right side of the screen. The trend graph is displayed.

Note: There are two Trend Graphs buttons available. One is for the lane; the other is for the sensor. If you are viewing Lane Overview mode, then the trend graph in the upper screen is where you select the viewing options. The trend graphs in the lower screen follow the settings from the upper screen. In Sensor Overview mode, you can select viewing options separately within the upper and lower screens.

Trend graphs show statistics based on specified criteria. These graphs are available for each lane and each sensor within that lane.

For Trend Graphs, you can select which data to display. Select from the Series drop-down menu.



Lane Total - Statistics are averaged for all sensors within the lane.

All Walk-By Groups - Statistics for inspection groups. These groups are defined in the Walk By Graphic setup, and pertain to a specific area of a part.

All Sensors - Statistics for each sensor.

Individual Sensors [names vary] - Statistics for only the selected sensor.

Note: A key (to explain color-coding and data point shape) is displayed to the right of the graph for All Walk-By Groups and All Sensors.

To change the graph criteria:

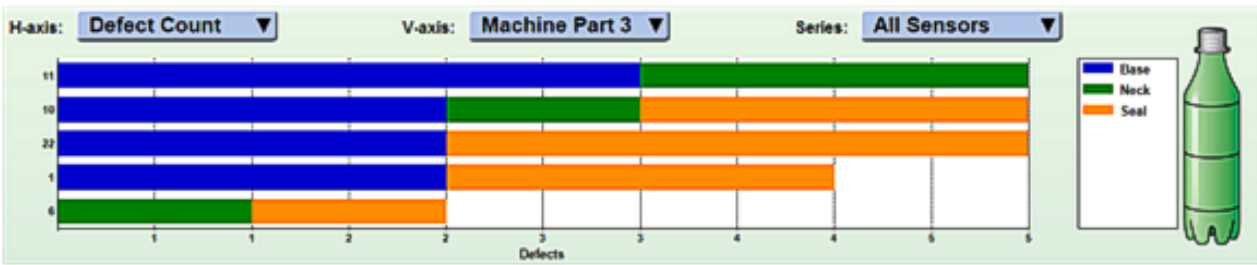
- 1. Select any button (next to H-axis, V-axis, Inspection, or Series) to view the drop-down menu options.
- 2. Select the desired criteria. The graph is updated to display based on your chosen criteria.

Machine Part Graphs

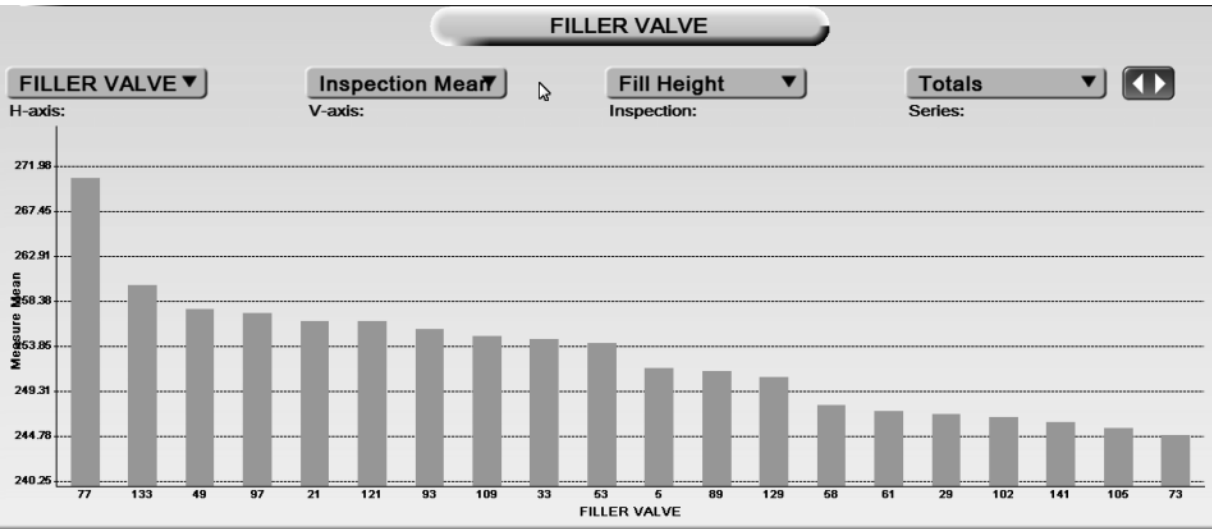
Machine Parts

Machine Part Graphs are available when you have the Correlation option installed. They display defect information for each machine part. The name on the button(s) matches your system configuration.

An example graph is displayed below. It shows defects for a machine part type, and the number of defects correlated to each sensor.



The example below shows machine part data for the fill height for each machine part, for one camera. To change the sorting order, right-click on the graph. For more information, see "Sort Data in Graphs" on page 52.

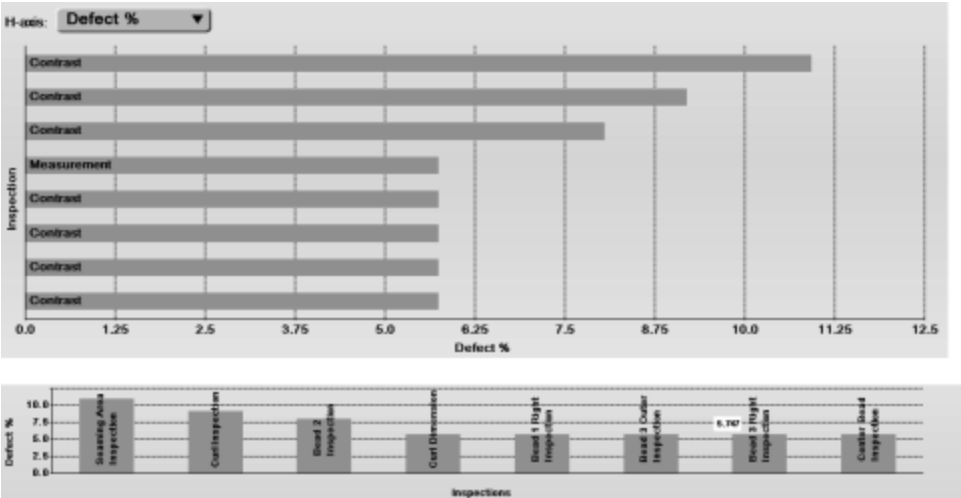


**Part Count is available when Totals is selected for Series. It is available in software versions 5.7.029, 5.8.007, and 6.0.035 and higher.

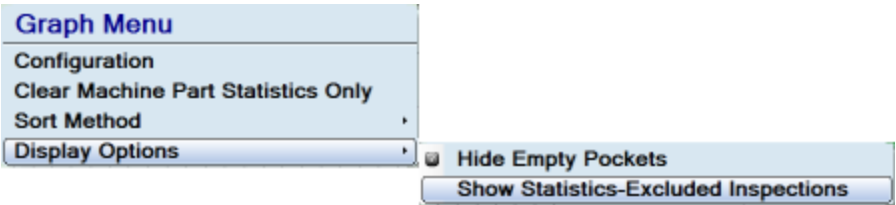
Inspections Graph



Select the Inspections button to display the Defect Count or Defect % for the selected sensor. It displays the failed inspections in descending order of failure. The example below shows the graphs in both Lane Overview and Sensor Overview modes.



When you right-click over the graph, you can choose to view or hide Empty Pocket or Statistics-Excluded inspections.



Part Spacing Graph

Note: This feature is in software versions 6.0.045 and later.

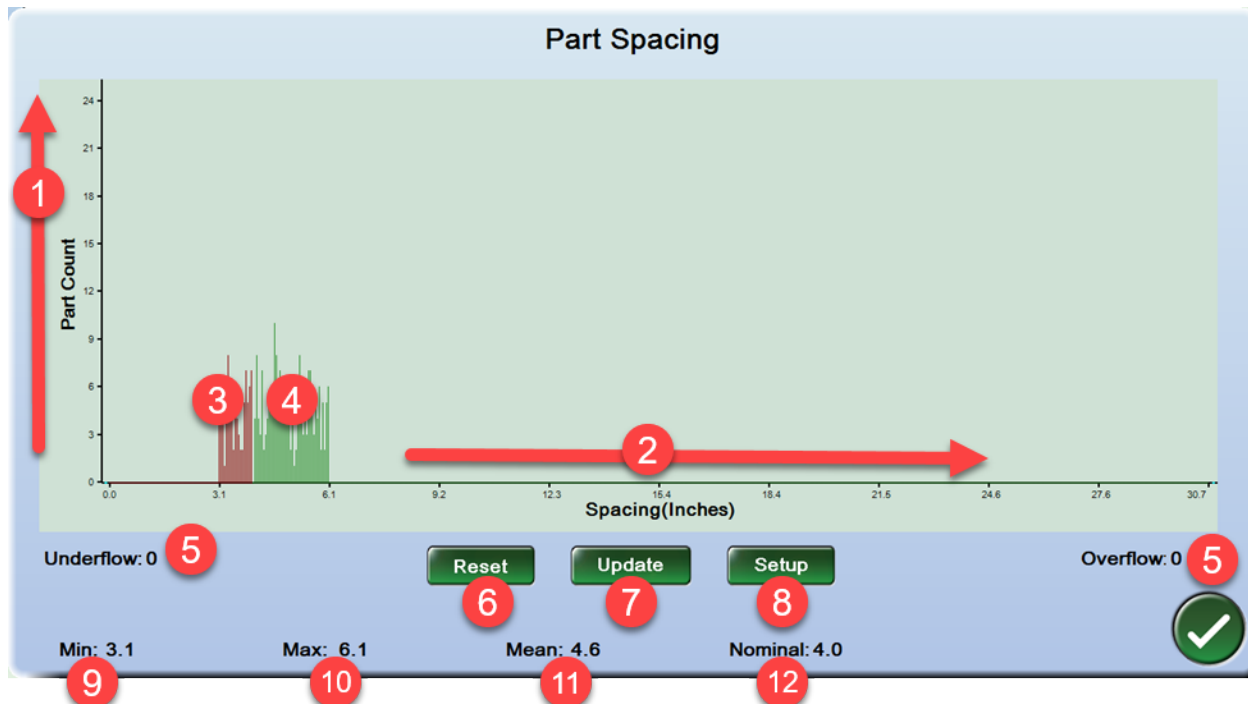
The Part Spacing Graph collects information about how far apart consecutive cans are based on the part present signal for each part. This information is scaled to real distances by having a good can width calibration (Part Width Calibration). The part width is measured in encoder ticks, which allows the system to convert the spacing (measured in encoder ticks) into the desired units.

There is a different graph for each lane in your system, and the graph shows the data collected from the first camera in the lane.

To access the graph:



Go to Lane Overview mode | **Tools** | **Part Setup** | **Part Spacing Graph**.



1) **Y-Axis** - The Y-Axis indicates the number of parts that are at a specific distance.

2) **X-Axis** - The X-Axis indicates the physical spacing between consecutive parts.

Color Coding:

3) **Red** - This indicates that the distance between parts is less than the nominal spacing desired for the given can size. Reducing the number of parts that are too close to each other will help eliminate reflections and shadows caused by the handling (in the production line) of the part.

4) **Green** - This indicates that the distance between parts is greater than the nominal spacing desired for the given can size. These parts should have minimal reflections and shadows caused by handling (in the production line) of the part. (This is good)

5) **Blue** - (not shown in this example) This indicates a part that is measuring a distance that is outside of the displayed X-axis, and therefore not displayable. It will either be stored in an overflow or underflow bin. The numeric values are also displayed.

6) **Reset** - Pressing this will clear out the collected data.

7) **Update** - Pressing this will collect the most recent data and then add it to what is currently collected.

8) **Setup** - Pressing this will cause the dialog "Part Spacing Setup" to appear, allowing you to modify the parameters of this Part Spacing Graph.

Statistical Data:

9) **Min** - This is the smallest measured part spacing found in the current batch of collected data.

10) **Max** - This is the largest measured part spacing found in the current batch of collected data.

11) **Mean** - This is the average part spacing for all of the parts in the current batch of collected data.

12) **Nominal** - This is the current distance that is used to color code the graph results to help visualize when parts are not sufficiently spaced apart. You can also set this manually.

Part Spacing Graph - Setup

Select the Setup button from the Part Spacing Graph to access this dialog.

Part Spacing Setup

1) 70.0 **Calibrated Part Width in Encoder Ticks**

2) 3.5 **Physical Part Width**

3) 4.0 **Spacing Nominal Value**

4) Inches **Units**

5) ☐ **Zero based X axis**

If the value for "Units" is set to "Encoder Ticks," the "Physical Part Width" will default to zero

✓ X

1) **Calibrated Part Width in Encoder Ticks** - This is the Part Width Calibration value displayed for informational purposes only.

2) **Physical Part Width** - If you select a unit other than "Encoder Ticks," then you must enter a value in your selected unit. The system will convert "Encoder Ticks" into your selected units. The chosen value will be saved with your part program.

3) **Spacing Nominal Value** - You can set this value manually here. It gives the current distance used to color code the graph results to help visualize when parts are not sufficiently spaced apart. The chosen value will be saved with your part program.

4) **Units** - The dropdown menu allows you to display the collected data in the selected units. The chosen value will be saved with your part program.

Encoder Ticks ▼

Encoder Ticks

Millimeters

Inches

5) **Zero Based X axis** - This selection allows you to change how the X axis data is displayed. When this box is checked, the starting point of the X axis will always be zero. When it is unchecked, the starting point will be dynamically calculated based on the currently collected data. The mean value of the collected data will be centered on the graph and the starting x value will correspond to that.

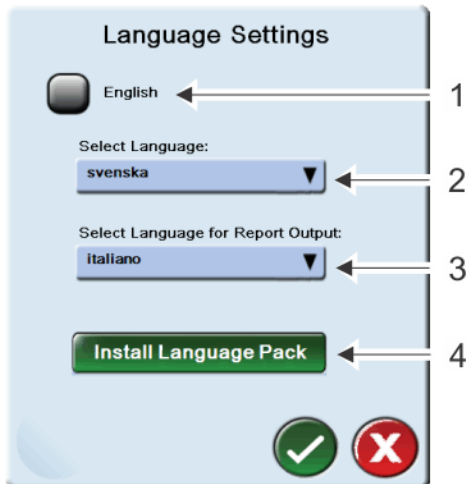
Language



Select a language.



Caution: The Language settings dialog (shown below) is the only place to change language, including number and date/time formatting. These settings must NOT be made in the Windows configuration, where the computer's locale must remain at US English. Otherwise, you may encounter errors and lose critical information.



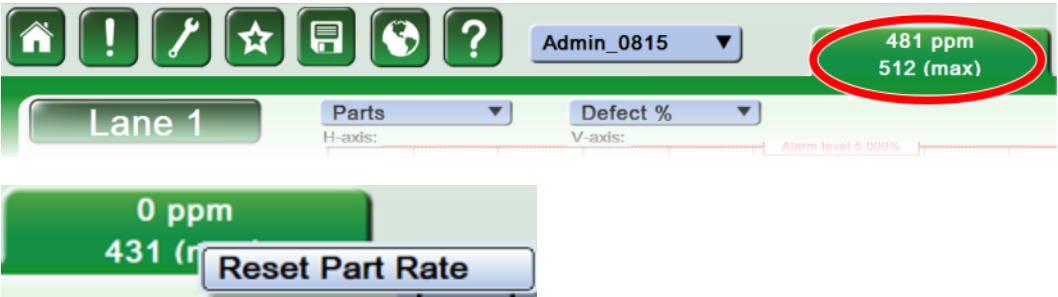
- 1) **English** - If this box is checked, the names of the available languages are displayed in US English (example: Swedish instead of svenska).
- 2) **Select Language** - Select the language to display on the user interface.
- 3) **Select Language for Report Output** - Select the language for the reports, such as the Lane Report from the Statistics menu.
- 4) **Install Language Pack** - When a new language is available, use this option to install the proper files. You will receive instructions from Pressco to install the language pack.

Languages available as of 6.0.047:

English	English
Deutsch	German
italiano	Italian
français	French
português	Portuguese
Español (América Latina)	Spanish (Latin America)
español (España)	Spanish (Spain)
svenska	Swedish
한국어	Korean
polski	Polish
čeština	Czech
русский	Russian
Nederlands	Dutch
Türkçe	Turkish
srpski	Serbian (Latin)
日本語	Japanese
中文(简体) 旧版	Chinese (Simplified) Legacy

Part Rate

The part rate is displayed in Lane Overview and Sensor Overview modes at the top of the screen. You can reset the part rate by right-clicking over the part rate tab and selecting Reset Part Rate.



The part rate displays:

- ppm (parts per minute) - The average rate over the last five seconds. It is updated once per second.
- max - The maximum rate found for all individual parts in the last five seconds determined in (parts per minute). The displayed value is the largest value found in the last five seconds.

Forced Reject

Force any part to be rejected. The system will reject all parts associated with the selected components, regardless of the pass/fail condition. This can be used to handle an emergency situation until repairs on a blow-molder or other machine can be made, among other uses.

Note: the correlation check boxes and machine parts are only displayed if your machine is using correlation.



To get to this screen: From Lane or Sensor Overview mode, select **Tools** | **Lane Setup** | **Start Forced Reject**.

Note: the lane must be Online to force rejects

The screenshot shows the 'Forced Reject' interface. On the left, there are several controls: a dropdown menu for 'Combined Machine Parts' (1), a 'Reject N Parts' dropdown (2) with a numeric keypad, a 'Sample Interval' input (3) set to 0, and a group of checkboxes for 'Cavity' (4), 'Spindle', 'InFeed', and 'OutFeed', each with a numeric input and a range in parentheses. Below these is a 'Rejector' section with two radio buttons labeled 1 and 2 (5). At the bottom left is a 'Start Forced Reject' button (6) and a red status message: 'Forced reject won't start until the system is on-line.' On the right, a 'Status' window displays a log of reject events, including 'Forced reject started.', 'Correlation(Cavity, Spindle, InFeed, OutFeed)', and a list of reject events for 9 parts, with an arrow pointing to 'Reject 7 of 9' (7). A green checkmark icon is in the bottom right corner.

1) Any Part/ Single Machine Part/ Combined Machine Parts/ By Sampling Inspection (drop-down menu)

Any Part - Reject any part, regardless of correlation to a machine part.

Single Machine Part - Reject a part or parts correlated to one machine part (example: cavity, or fill valve). You can enter multiple values, such as Cavity 5-7, 11. Use the onscreen keypad.

Combined Machine Parts - All correlated machine parts are displayed (as in the example above). Check the boxes next to the desired machine parts. Only one correlation value per machine part is allowed (example, Cavity 2 and Spindle 7). Use the keypad.

Note: Combined Machine Parts is an AND function. The part must be correlated to each machine part and number entered. If there are no such parts, then none will be rejected.

2) Reject One Part/ Reject N Parts/ Continuous Reject (drop-down menu)

Reject one part, 'N' parts, or continuously reject from a specific machine part. Select the Start Forced Reject button to begin rejecting. If you select Single or Combined Machine Parts in the above drop-down menu, the part(s) must meet that criterion.

Reject One Part - Reject the next part that reaches the reject station, regardless of inspection status.

Reject N Parts - Enter a number of parts you want to reject, regardless of inspection status.

Continuous Reject - Reject all parts regardless of inspection status, until you select the Stop Forced Reject button.

3) Sample Interval

Only reject parts every n number of intervals. If you enter 3 Revolutions, then the system will reject parts on every third revolution. If you select Single or Combined Machine Parts in the first drop-down menu, the part(s) must meet that criterion.

4) Select Machine Part

The names of your machine part components [only shown if you select Single or Combined Machine Parts in the first drop-down menu].

5) Rejector

Specify which rejector to force rejection of the part. This option appears only if you have more than one rejector in your system.

6) Start Forced Reject/ Stop Forced Reject

When you select Start Forced Reject, the criteria specified are applied and the parts are rejected. Select the Stop Forced Reject button to stop the reject process.

Note that if you only reject one part, or specify a number of parts, the button toggles back to "Start Forced Reject" automatically.

7) Status Box

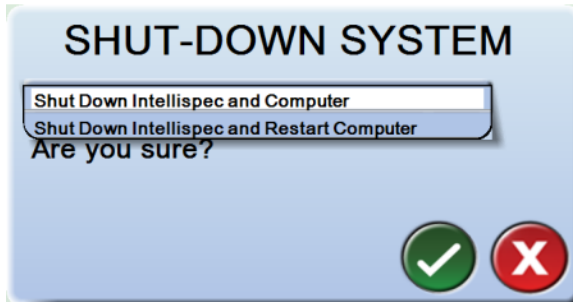
Displays information about the rejection process.

Exiting the Intellispec Software

You must have proper user permissions to exit the software. This prevents unauthorized system shutdowns. Contact your system administrator if you need user permissions.

To exit Intellispec software:

1. Log in.
2.   Select Home | Tools | Exit System.
3. Select an option.



4.  Select the OK button. The Intellispec software and/or computer shuts down (and restarts if applicable).

Chapter 7 Alarms

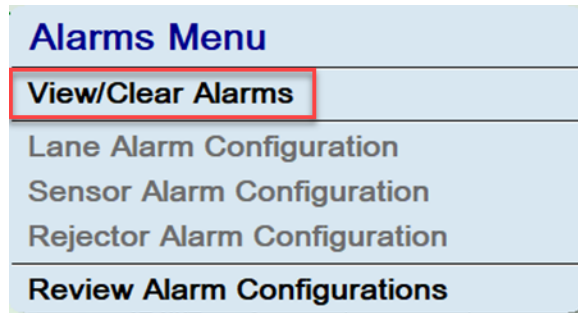
Types of Alarms

There are five types of alarms: System, Lane, Sensor, Rejector, and Machine Part alarms. Most of these are configurable (except the System Alarms - UPS and over temperature).

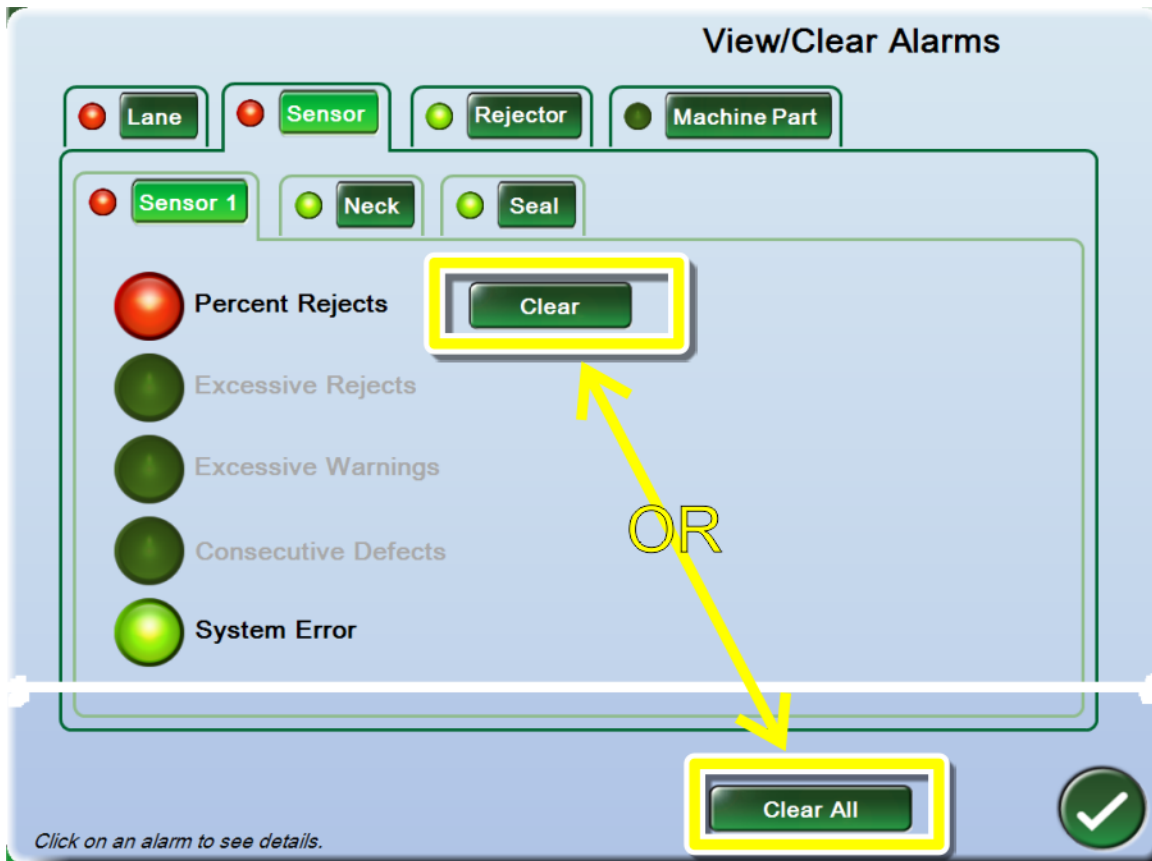
Note: Alarms are recorded in the system log reader, even when the alarms are automatically cleared.

View and Clear Alarms

  To View or Clear Alarms, select an Alarm button. If no alarm is active, from Lane or Sensor Overview mode, select the Alarms icon | View/Clear Alarms.



Select the Clear button to clear a single alarm, or the Clear All button to clear all alarms, including alarms in other tabs.

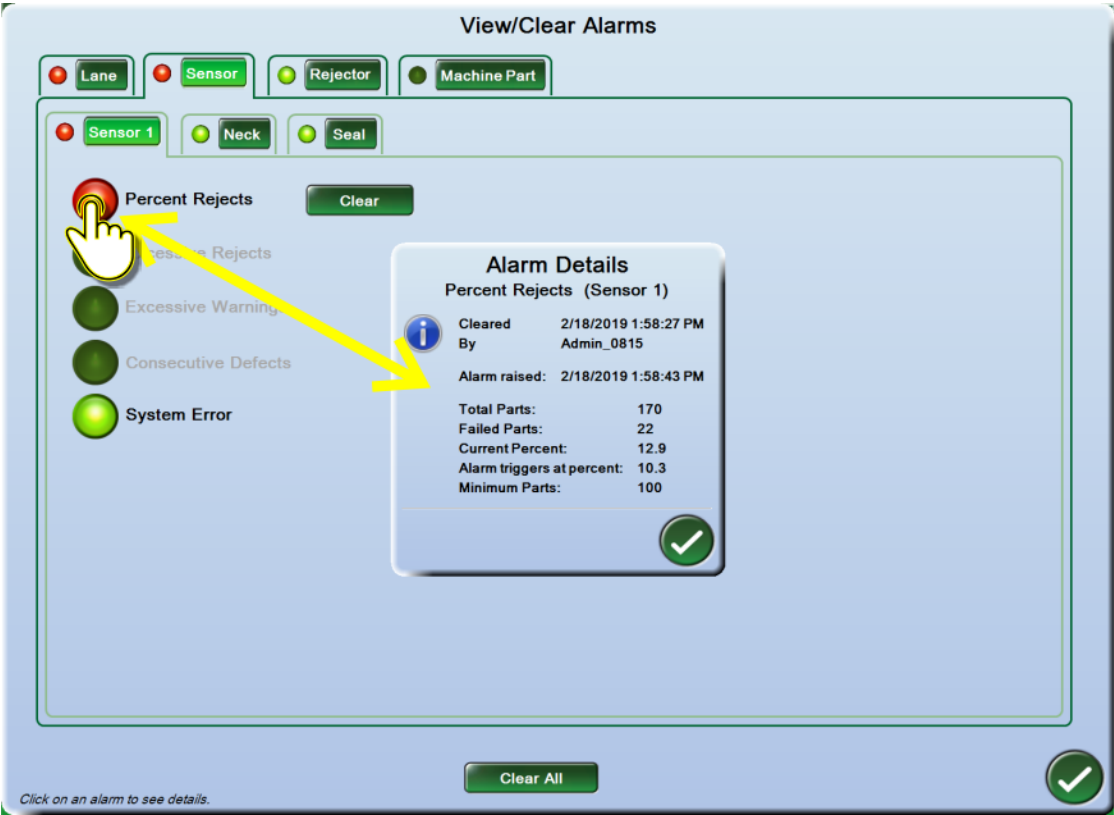


The indicators in this screen show whether an alarm is enabled, and whether it is triggered.

-  Red On - the alarm is both enabled and triggered
-  Green On - the alarm is enabled, but has not been triggered
-  Green Off - the alarm is not enabled nor triggered

Select different tabs to see more alarms. The tabs (except Lane) have sub-tabs. If any alarm is raised in a sub-tab (Sensor 1 in our example), then the container tab (Sensor) also shows an alarm.

Select any indicator to see alarm details. You can also do this if an alarm is not active.

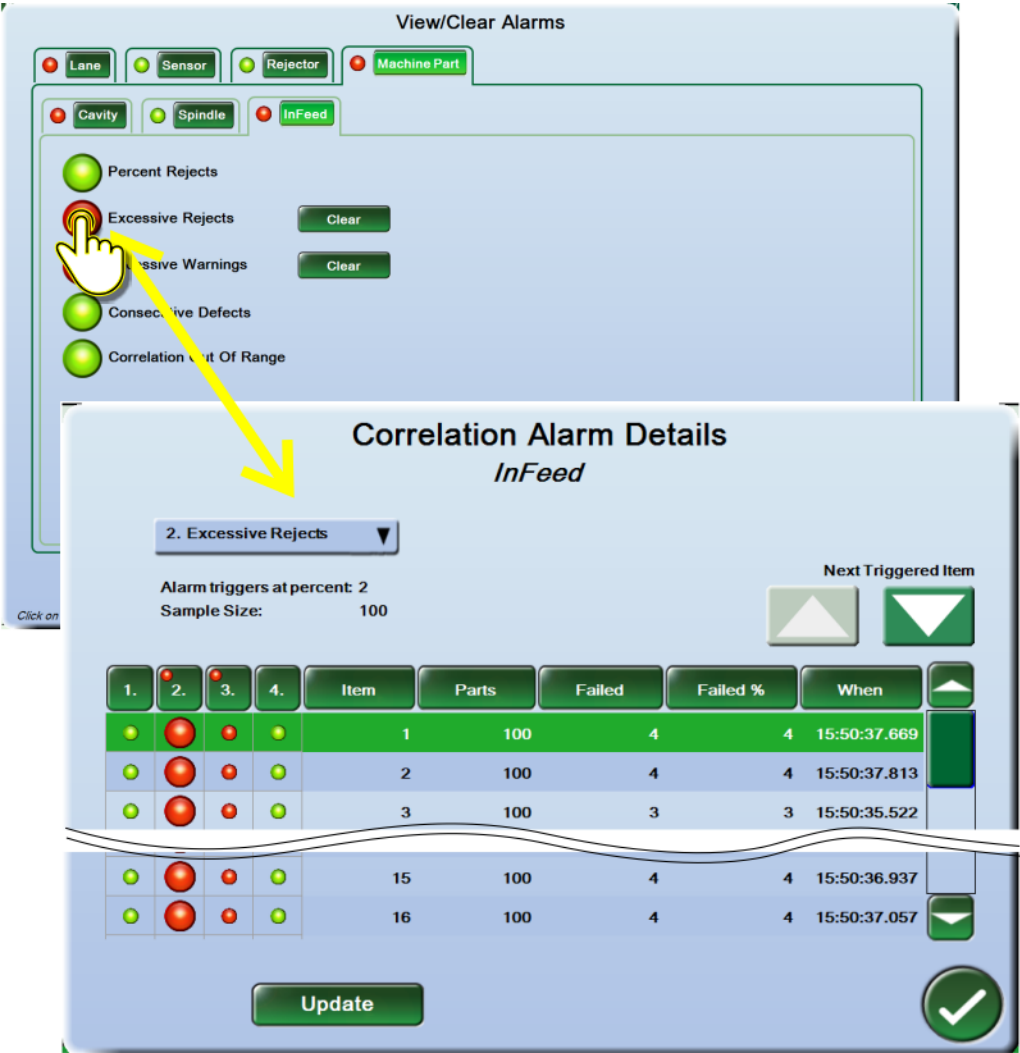


View and Clear Machine Part Alarms

These alarms are valid if your system has machine parts configured in Lane Setup.



From the alarms button in Lane or Sensor Overview mode | View/ Clear Alarms | Machine Part:



Selecting any machine part alarm shows a details table breaking the alarm details down per correlation value (aka machine part item).

The table lets you select any of the (enabled) alarms either by using the drop down or by clicking one of the columns 1., 2., 3., etc.

A "Next Triggered Item" navigator helps to quickly find the item in alarm when all machine parts cannot be displayed simultaneously.

The Update button updates current inspection information (how many parts have currently been processed and how many failed; this is automatically done if an alarm is raised while in this view).

Review Alarm Configurations



You can view all the alarm setups from one screen. Access this screen from Lane or Sensor Overview mode | alarms button | Review Alarm Configurations.

Review Configurations for All Alarms

Lane #1 (LANE) Source Type All Activation Hide Disabled

Light TreeExtended I/O

LaneSourceAlarmActivationVisualAudibleDigital Out

#1 (LANE)	Lane		Percent Defects	Warning	3600s	3600s	0x2 (Bit 1)
#1 (LANE)	Lane		System Error	Warning	10s	2s	–
#1 (LANE)	Sensor 1	Main	Percent Rejects	Warning	3600s	3600s	0x2 (Bit 1)
#1 (LANE)	Sensor 1	Main	Consecutive Defects	Warning	3600s	3600s	0x2 (Bit 1)
#1 (LANE)	Sensor 1	Main	System Error	Warning	10s	2s	–
#1 (LANE)	Sensor 2	Color 1	Percent Rejects	Warning	3600s	3600s	0x2 (Bit 1)
#1 (LANE)	Sensor 2	Color 1	Consecutive Defects	Warning	3600s	3600s	0x2 (Bit 1)
#1 (LANE)	Sensor 2	Color 1	System Error	Warning	10s	2s	–
#1 (LANE)	Sensor 3	Color 2	Percent Rejects	Warning	3600s	3600s	–
#1 (LANE)	Sensor 3	Color 2	System Error	Warning	10s	2s	–
#1 (LANE)	Rejector 1		Jam at Reject Confirm	Warning	3600s	3600s	–
#1 (LANE)	Rejector 1		Missed Reject	Warning	10s	2s	–
#1 (LANE)	Rejector 1		Missed Result	Warning	10s	2s	–
#1 (LANE)	MP1	Filler Valve	Percent Rejects	Warning	3600s	3600s	–
#1 (LANE)	MP2	Capper Head	Percent Rejects	Warning	3600s	3600s	–
#1 (LANE)	MP2	Capper Head	Excessive Rejects	Warning	3600s	3600s	–

Use the drop-down menus at the top of the screen to filter what you want to see. For example, view the alarm setups for only the Sensors, through the Source drop-down.

All

Lane

Sensor

Rejector

Machine Part

Sort data by column, by selecting a button at the top of the table. For example, sort the alarms alphabetically by sensor/ machine part name, by clicking the blank button.

Capper Head

Capper Head

Color 1

Color 2

Color 2

Filler Valve

Main

System Alarms - Description and Configuration

The system alarms are the UPS (uninterruptible power supply) and CPU temperature alarms. You can configure the UPS shut down time.

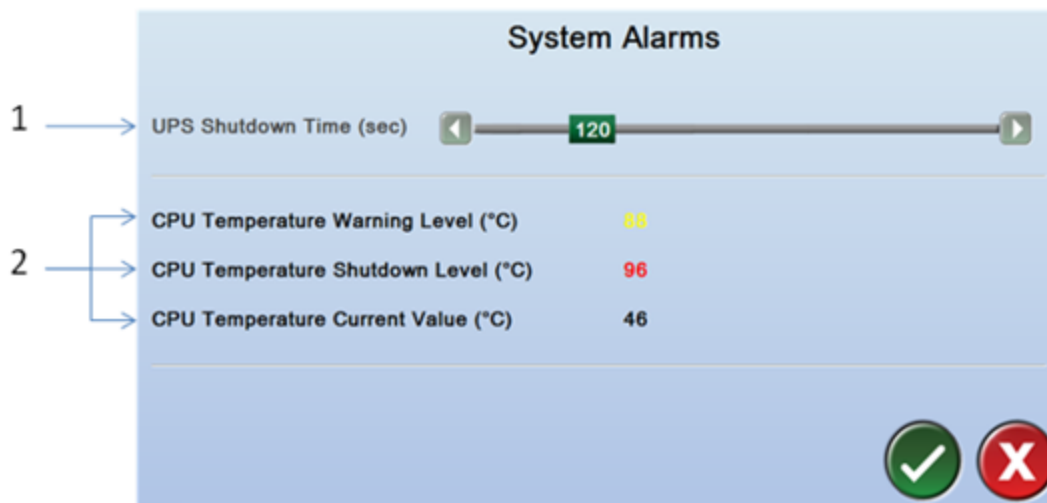
These are only shown in the System Overview and will not show up as flashing lane buttons, or on any light tree, and will not sound a horn.

Alarm	Description	Action
UPS	Battery is dead. Or: Plant power is lost and the UPS shutdown time is exceeded. The Intellispec shuts down.	Replace battery Automatically resets If plant power is restored before the Intellispec shuts down, then the alarm is automatically cleared. Otherwise, restart the system.
Over temperature	CPU temperature exceeds highest recommended operating temperature. The Intellispec system shuts down. You must wait till the processor cools before resuming operation.	

System Alarm Setup



To get to this menu: select Home | Alarms.



1) **UPS Shutdown Time** - The number of seconds that the UPS will maintain power to the system if AC power has been lost. The Intellispec system shuts down after this time period. This allows for a normal Windows shutdown.

2) **CPU Temperature** - If a multiple core computer is used, the highest temperature is displayed. If the shutdown CPU temperature is reached, the Intellispec system shuts down.

Lane Alarms - Brief Description

The Lane Alarms affect the hardware associated with one lane. A lane usually refers to one production line, and can contain multiple sensors.

Alarm	Description	Action	4-Light Tree ²	5-Light Tree ²
Percent Defects ¹	Percentage of defects exceeds the set limit.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Red	 Red
Offline ¹	Lane goes offline	Automatically resets	 Green = system is online  Red = system is offline	 Green = system is online  Red = system is offline
Chute Full ¹	Reject chute is full	Clear chute Reset alarm on screen	 Red	 Red
Power Status ¹	Lane AC Power is lost	Automatically resets Troubleshoot: Check that the inspection module power switch is on. Check +24V supply.	 Red = AC power is lost  Blue = power is OK	 Red = AC power is lost  White = power is OK
Good Parts ¹	Used as a part counter. When specified number of parts is reached, then alarm is triggered.	Replace the box with counted parts with an empty box, then clear alarm. Reset alarm on screen	 Red	 Red
Reminder ¹	This alarm reminds operators to conduct a SmartCAL test	Perform SmartCAL or other task indicated on screen.	 Red	 Red

Alarm	Description	Action	4-Light Tree ²	5-Light Tree ²
	periodically for verification of recipe (or part program), or other task.	Reset alarm on screen		
System Error ¹	Part tracker or other internal system errors	Depends on specific alarm (see details for System Error Alarm) Reset alarm on screen	 Red Red Flashing for Part Tracker Lost Communication	 Red Red Flashing for Part Tracker Lost Communication

¹ If you want to connect an external monitoring device such as a PLC, an optional Extended I/O board is required for each lane.

² The light tree displays this color for the Duration if Visual Enabled.

Sensor Alarms - Brief Description

Sensor alarms are configured for each sensor (camera or other sensor).

Alarm	Description	Action	Light Tree ²
Percent Rejects ¹	Percent Rejects - This alarm is triggered when the Trigger [%] is exceeded. It will remain triggered until you clear the alarm.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Red
Excessive Rejects ¹	Excessive Rejects - This alarm is triggered when Trigger [%] of the last Sample Size parts have been found defective. It will remain triggered until you clear the alarm.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Red
Excessive Warnings ¹	Excessive Warnings - This alarm is triggered when Trigger [%] of the last Sample Size parts have been found with a warning status. It will remain triggered until you clear the alarm. Warnings are enabled in the Retro-Spec Options when you are editing an inspection. They can also be enabled in Lane Setup Select Features.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Amber
Consecutive Defects ¹	Consecutive Defects - This alarm is triggered when Con-	Check the production line to see what might be creating too many bad parts	 Red

Alarm	Description	Action	Light Tree ²
	secutive Triggers has been exceeded [the sensor had too many consecutive defects]. It will remain triggered until you clear the alarm.	Reset alarm on screen	
Mass Lighting	Mass Lighting - This alarm is triggered when the lighting threshold falls below a minimum level.	Clean the mass sensors and emitters Reset alarm on screen	none
System Error ¹	This indicates a missed part, missed acquisition, missed result, or other internal error.	Reset alarm on screen	 Red

¹ If you want to connect an external monitoring device such as a PLC, an optional Extended I/O board is required for each lane.

² The light tree displays this color for the Duration if Visual Enabled.

Rejector Alarms - Brief Description

Rejector Alarms are triggered when a part did not get rejected as expected.

Alarm	Description	Action	Light Tree ²
Jam at Reject Confirm ¹	The reject confirm path has been blocked too long. Works with Reject Confirm Calibration (Optional)	Remove jammed parts at the rejector, then clear alarm. Reset alarm on screen	 Red
Missed Reject ¹	System missed rejecting a part. Works with Reject Confirm Calibration (Optional)	Reset alarm on screen	 Red
Missed Result ¹	The part reached the rejector before the part was fully inspected and the result was sent to the part tracker. That is, the inspections took too long to run.	If this occurs often, look at the inspection settings. It may be possible to use other settings to reduce inspection time. Reset alarm on screen	 Red
Missed Good Part ¹ (available in software version 6.0.045 and higher)	A bad part passed by the Good Part Confirm sensor. Works with Good Part Confirm Calibration (Optional).	Reset alarm on screen	 Red

¹ If you want to connect an external monitoring device such as a PLC, an optional Extended I/O board is required for each lane.

² The light tree displays this color for the Duration if Visual Enabled.

Machine Part Alarms - Brief Description

Machine Part alarms are the correlation-based alarms. They are visible only if your system has correlation sensors installed.

Note: for Machine Part Alarms, except Correlation Out of Range, statistics apply to each correlation value separately. That is, if one of 100 machine parts fails at 100 percent, the detected percentage is 100 percent while overall it would be 1 percent.

Alarm	Description	Action	Light Tree ²
Percent Rejects ¹	Percent Rejects - This alarm is triggered when the Trigger [%] is exceeded. It will remain triggered until you clear the alarm.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Red
Excessive Rejects ¹	Excessive Rejects - This alarm is triggered when Trigger [%] of the last Sample Size parts have been found defective. It will remain triggered until you clear the alarm.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Red

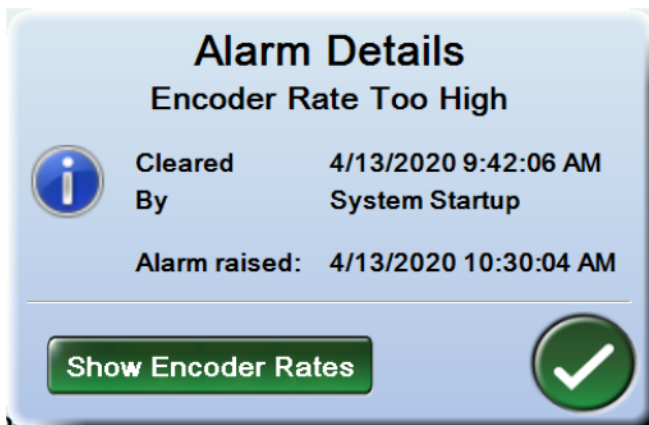
Alarm	Description	Action	Light Tree ²
Excessive Warn-ings ¹	Excessive Warnings - This alarm is triggered when Trigger [%] of the last Sample Size parts have been found with a warning status. It will remain triggered until you clear the alarm. Warnings are enabled in the Retro-Spec Options when you are editing an inspection. They can also be enabled in Lane Setup Select Features.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Amber
Consecutive Defects ¹	Consecutive Defects - This alarm is triggered when Consecutive Triggers has been exceeded [the sensor had too many consecutive defects]. It will remain triggered until you clear the alarm.	Check the production line to see what might be creating too many bad parts Reset alarm on screen	 Red
Correlation Out of Range	Correlation Out of Range - This alarm is triggered if the part tracker counts a machine part that was not configured.	Reset alarm on screen	 Red

¹ If you want to connect an external monitoring device such as a PLC, an optional Extended I/O board is required for each lane.

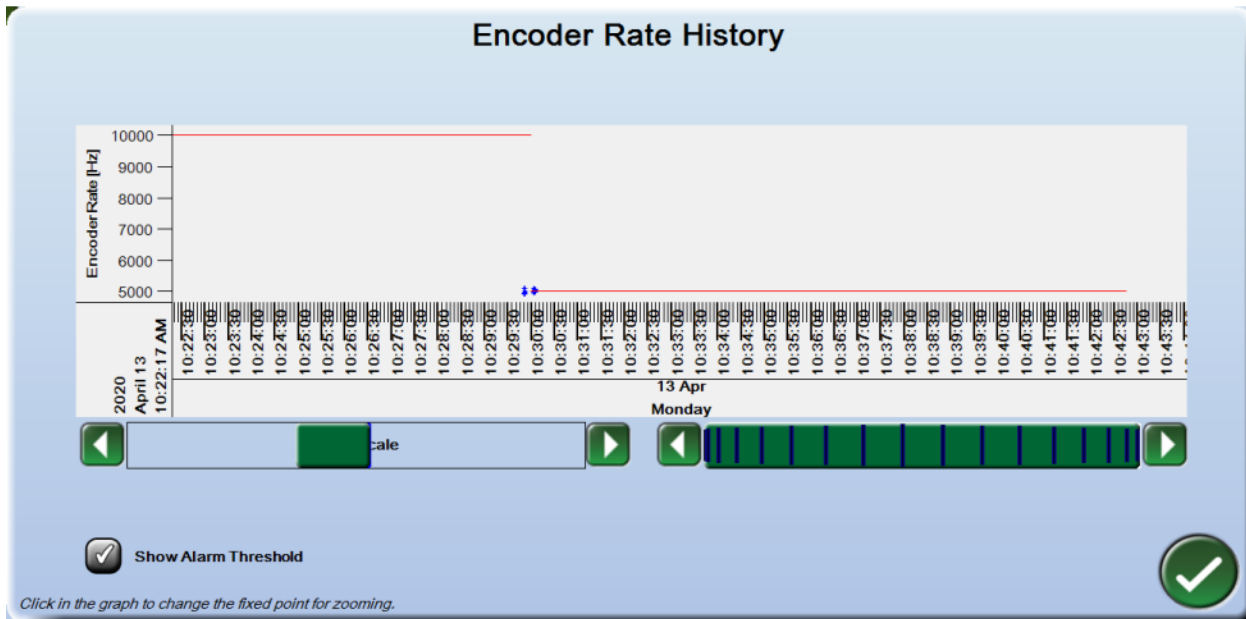
² The light tree displays this color for the Duration if Visual Enabled.

Encoder Rate Alarm Threshold

The Encoder Rate Alarm is raised when the encoder rate exceeds a threshold. You can also “see” the encoder rates from this alarm. This is a System Error alarm. Select the LED of the alarm (from the View/Clear Alarms screen) to get more details.



If the alarm is active you can Show Encoder Rates.

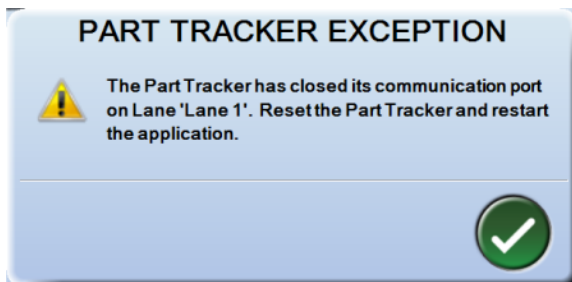


Here you can view the recent encoder rates and alarm thresholds. The blue marks in the graph are the encoder rates, the red lines are the alarm thresholds.

You can change the time scale by using the slider to the left to see older data. When changing the time scale, the Fixed Point remains at the same place in the graph. You can change this point by clicking inside the graph. The wheel allows moving the data left and right without changing the scale.

Background information

If the encoder rate is too high, it may cause the part tracker to crash, resulting in the following message:



The part tracker and system both need to be shut down and reset, which causes downtime.

This can happen if:

- the encoder has too high a resolution for the normal part rate, or
- the part rate (for the current encoder resolution) exceeds a threshold rate that the part tracker cannot handle.

To allow intervention before this happens, the system has a System Error Alarm of type “Encoder Rate Too High.”

Viewing the Threshold and Rates



To view the threshold, go to Lane Overview | **Tools** | **Hardware Setup** | **Encoder Rate Alarm Threshold**.



Tools Menu

Reporting

Part Setup

Lane Setup

Hardware Setup

I/O Diagnostics

Extended I/O Configuration

Correlation Diagnostics

Offline Imaging

Part Present Delay Calibration

Part Present Delay with Encoder

Reject Delay Calibration

Part Tracker Simulation

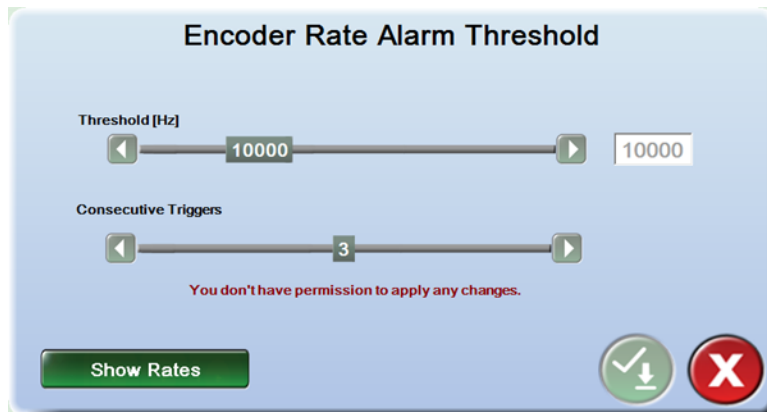
PDX Configuration

Missed Packets Exception

Encoder Rate Alarm Threshold

Disable Sensor

You can view the threshold, and **Show Rates** from this screen.



Chapter 8 Statistics and Reports

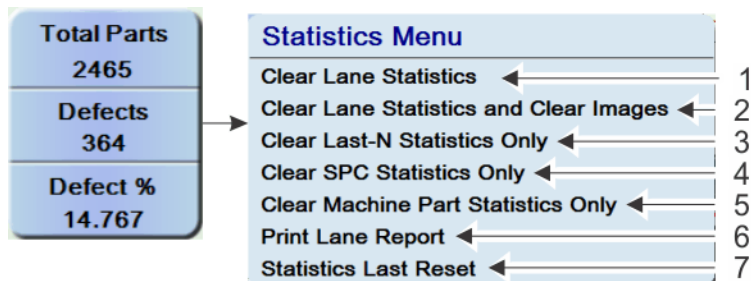
See also: "Graphs" on page 51

Statistics Menu

Use the Statistics menu in the Lane Overview screen to view, reset, or print statistics.

Note: Some menu items are available to advanced users only

Lane *n* To view the Statistics menu: Select a Lane button | Click over a statistics box.



- 1) **Clear Lane Statistics** - Clear the statistics for the lane only.
- 2) **Clear Lane Statistics and Clear Images** - Clear the statistics for the lane and empty the defective image buffer.
- 3) **Clear Last-N Statistics Only** - Clear the statistics for the Last N and Last N% parts in the corresponding graphs. It also clears the counts for population-based alarms, and clears such alarms that are currently triggered. (includes: Percent Defects, Good Parts, Percent Rejects, Excessive Rejects, Excessive Warnings, and Consecutive Defects)
- 4) **Clear SPC Statistics Only** - (Only available if you have Retro-Spec inspections enabled to keep SPC data) Clear the statistics from statistical process control.
- 5) **Clear Machine Part Statistics Only** - (Only available if machine part correlation is enabled on your system) Clear the statistics for the machine parts.
- 6) **Print Lane Report** - Send the lane statistics report to the default configured printer.
- 7) **Statistics Last Reset** - Display the date and time when the lane statistics were last reset.

Statistics Grid

Statistics The Statistics Grid displays information about each Sensor. There are two types of Statistics Grids: Lane and Sensor.

Lane Statistics Grid

The Lane Statistics Grid (in Lane Overview mode) displays general information about each Sensor. It shows the Total number of parts run, Sensor, Defects, Defect %, Last N, and Last N %.

Show:	Sensors	Detail:	All			
Sensor		Total	Defects	Defect %	Last N	Last N %
Rivet		56748	56748	100.000	953	95.300
Panel		56748	56748	100.000	953	95.300

Sensor Statistics Grid

This grid is available when you display Sensor information. It shows specific information for each sensor, including Inspection, Total number of parts run, Defects, Defect %, Last N, and Last N %.

Inspection	Total	Defects	Defect %	Last N	Last N %
Pattern Match	56748	56748	100.000	953	95.300
Radial Edge	56748	0	0.000	0	0.000
Ring	56748	0	0.000	0	0.000
Ring	56748	0	0.000	0	0.000

Note: you can configure the statistics display. Your system may not display all of the above-mentioned items.

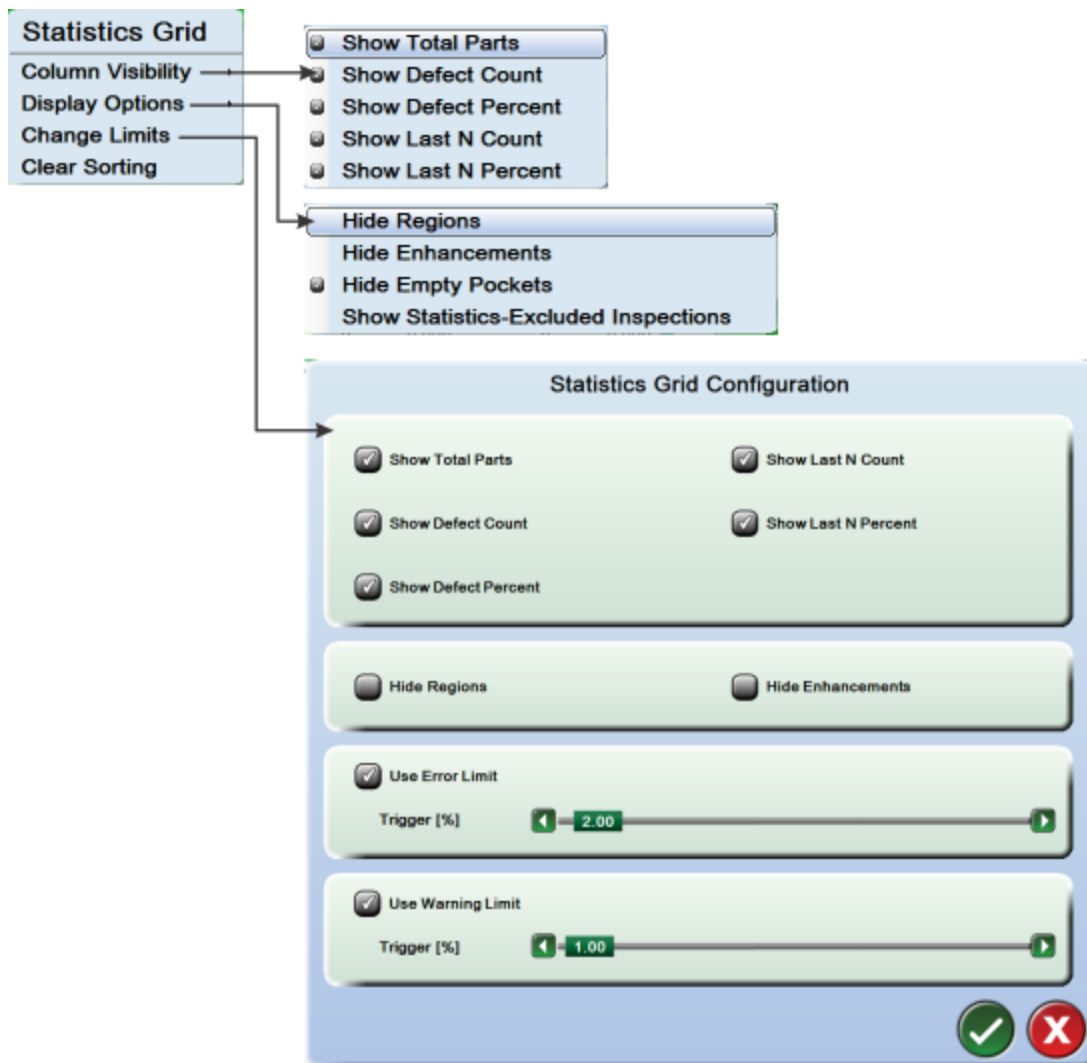
Sorting order

To sort any column in ascending or descending order, select the button at the top of the column. Select it again to toggle to the opposite order. Right-click to clear sorting in the statistics grid.

Inspection	Total	Defects	Defect %	Last N	Last N %
Pattern Match	56748	56748	100.000	953	95.300
Radial Edge	56748	0	0.000	0	0.000
Ring	56748	0	0.000	0	0.000
Ring	56748	0	0.000	0	0.000

Statistics Grid Options

These settings are applied to all statistics grids, whether in the Lane Overview or Sensor Overview mode. Right-click over any statistics grid to see the options. These are explained below.



Column Visibility - The number of columns in the grid.

Display Options - The number of rows in the grid. This only affects the statistics grids in the Sensor Overview level.

Hide Regions - Hide regions such as Ring, Adaptive, or Rectangle from the grid.

Hide Enhancement - Hide enhancements such as Clipping, Stretch Grayshades, or Power Filter.

Hide Empty Pockets and Show Statistics-Excluded inspections - Show or hide Empty Pocket or Statistics-Excluded inspections.

Change Limits - Change the number of columns and rows of the grids in the first two sections of the menu. These are the same as Column Visibility and Display Options.

Use Error Limit - Causes the Defect % and Last N % columns to display in red if the trigger percentage is exceeded. This allows you to see these statistics from a distance.

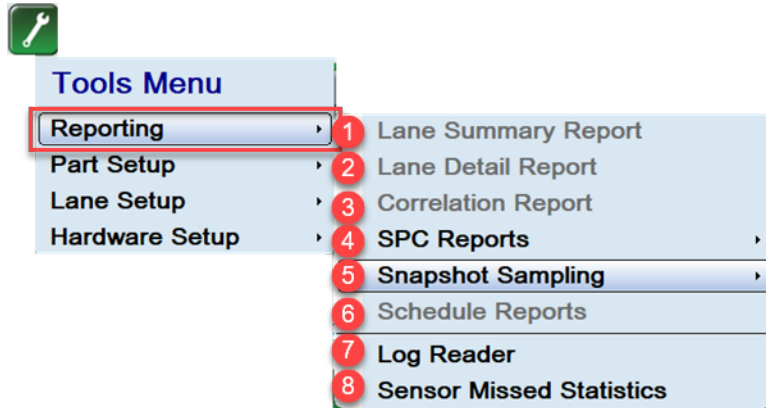
Use Warning Limit - Causes the Defect % and Last N % columns to display in yellow if the trigger percentage is exceeded. This allows you to see these statistics from a distance.

Clear Sorting - Puts the sorting order back to the default setting.

Reporting

The Intellispec generates many different reports to provide inspection detail. Many of these reports can be transferred outside of the Intellispec.

 To view reports: Select a Lane button | Tools | Reporting.



Note: Some menu items are only available to advanced level users.

- 1) Lane Summary Report
- 2) Lane Detail Report
- 3) Correlation Report
- 4) **SPC Reports** - (SPC = Statistical Process Control) SPC Reporting allows selected RetroSpec parameter statistics to be printed or saved to file. For Operators, this function allows you to clear SPC statistics.
- 5) **Snapshot Sampling** - Snapshot sampling allows you to generate statistics for a limited number of future parts (up to 1,000,000). You can sample defect images (up to 1,000 per camera) and good images (up to 1,000 per camera).
- 6) Schedule Reports
- 7) "Log Reader" on page 86
- 8) **Sensor Missed Statistics** - Displays the number of missed parts and missed part tracking for the sensor.

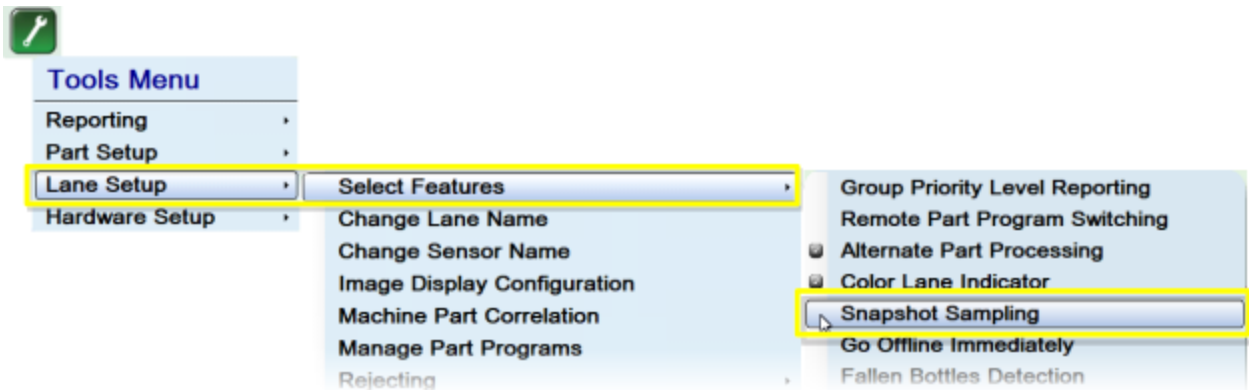
Snapshot Sampling

What is Snapshot Sampling?

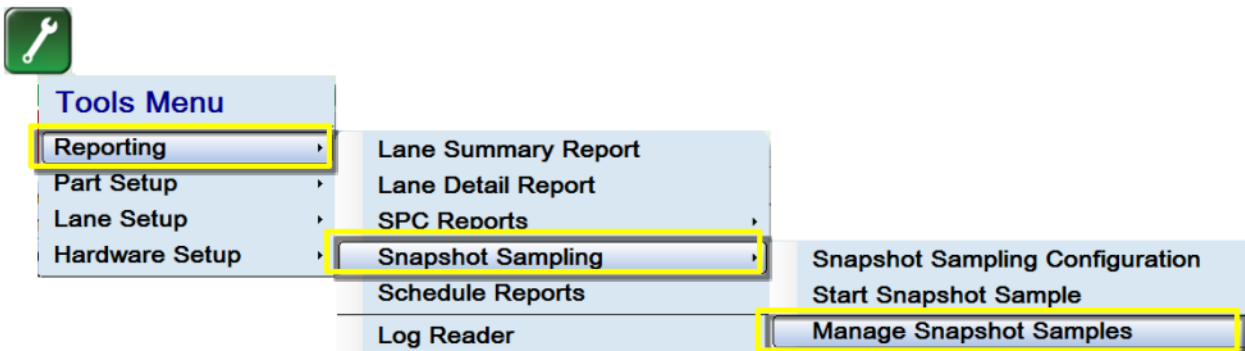
Snapshot sampling allows you to generate statistics for a limited number of future parts (up to 1,000,000). You can sample defect images (up to 1,000 per camera) and good images (up to 1,000 per camera).

One purpose of this feature is to validate the current performance of the system setup.

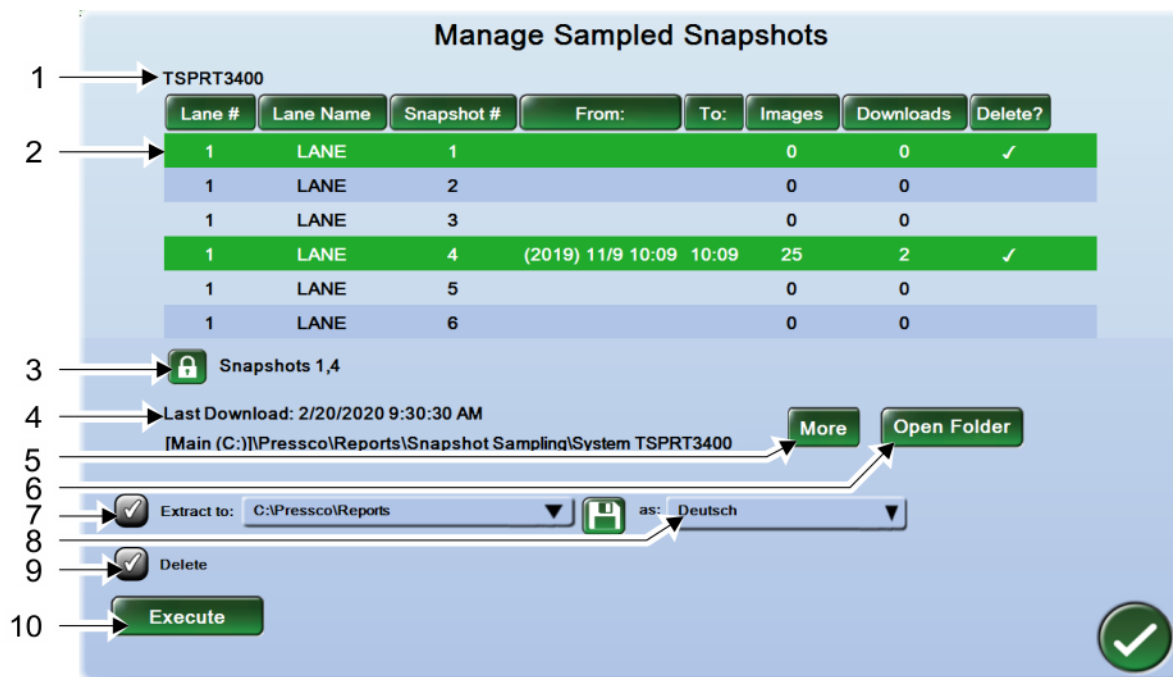
The sampled data generates statistics for: lane defects / defect %, sensor defect / defect %, and walk-by-group defect / defect %.



Manage Snapshot Samples



No permissions are required to access this dialog. However, some options require additional permissions.



Chapter 8

The dialog box shows the following:

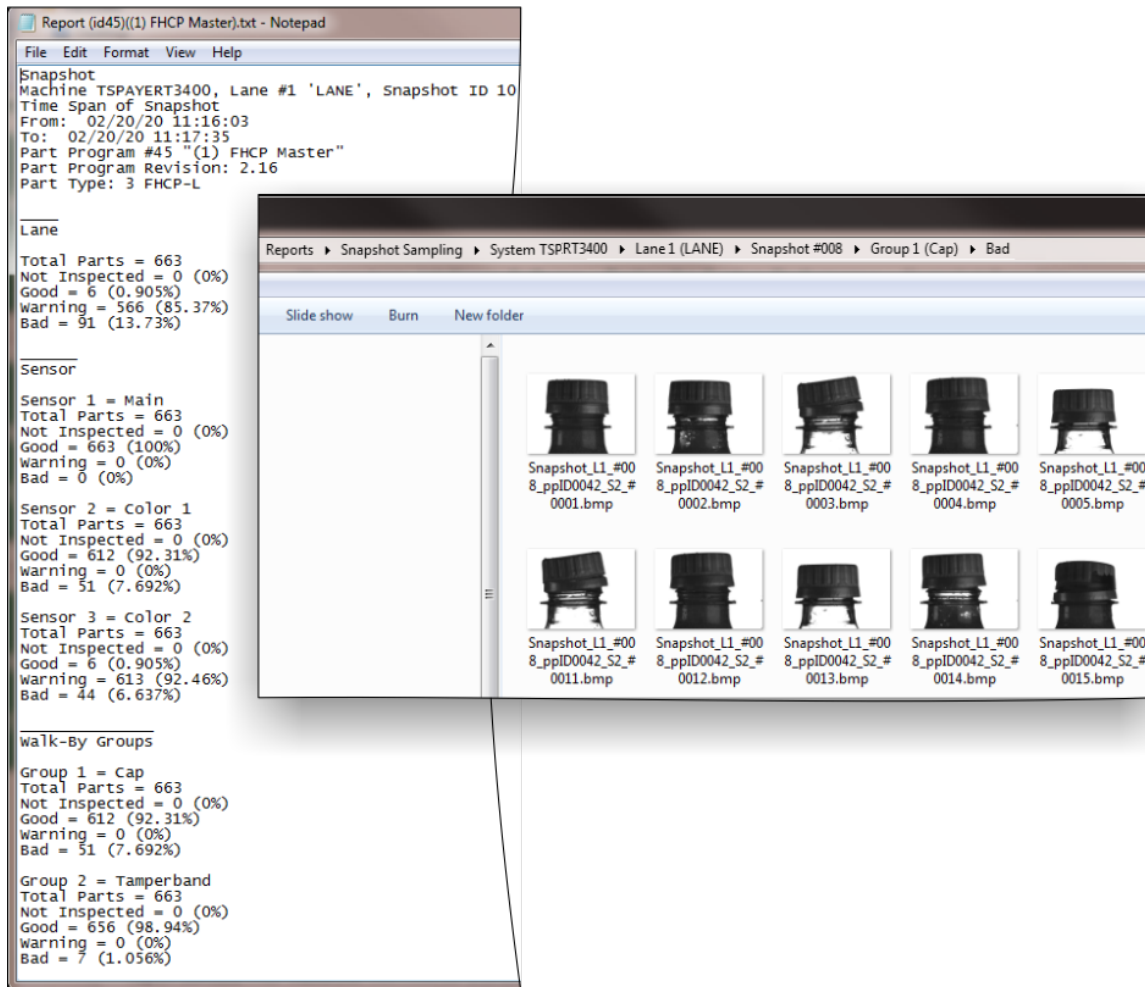
- 1) The system identifier, such as ISPEC 1236
- 2) A table of generated snapshots, which can be downloaded or deleted
- 3) Multiple row selection: Clicking on any row toggles whether it is selected. When multiple rows are selected, a lock icon appears; clicking the lock clears the selection.

Details of the current selection in the table:

- 4) The most recently downloaded location.
- 5) [More] shows the list of all locations where the selection was downloaded to. This is only shown when the snapshot was downloaded to more than one location.
- 6) [Open Folder] opens Windows Explorer for the location where the snapshot was saved (if it still exists). You can open the text file and browse the image folders from that location.
- 7) When the Extract to: box is checked, you can select the location where to download the report.
- 8) Select the language to download in. Available selections are English, Display (currently selected display language), or Report (currently selected report language).
- 9) If the Delete box is checked, the snapshot data and images will be deleted from memory, after you Execute the sequence to save all the data and images to the desired folders. The rows in the table are displayed in red after the information is deleted from memory. The content in the output folders is not deleted.
- 10) Select the Execute button to begin saving the text files and images to the selected locations.

Example snapshot text file and images:

This example shows the snapshot of one lane, three sensors, and walk-by groups. The images are found in the sub-folders where you saved the snapshot information.

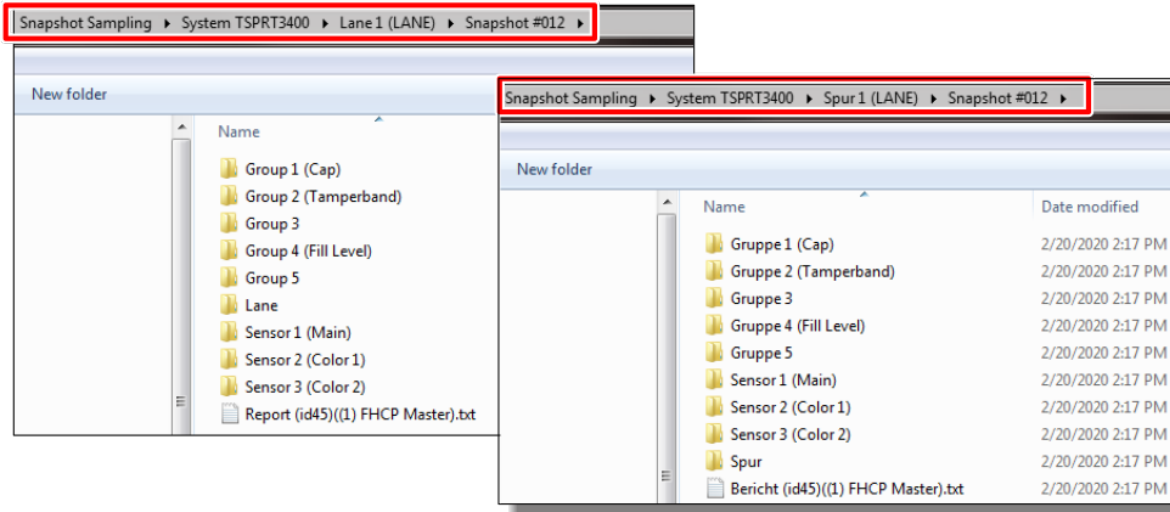


Downloaded folder structure:

The "Extract to:" location specifies the root under which many snapshots from many sources would be saved. The structure is the following:

[Root]\System ID\Lane Number (Lane Name)\Snapshot #\

Each subfolder is represented in the selected language. The example below shows information saved in both English and German.



Log Reader



To get to this menu: select Home | Tools | Log Reader.

The log reader displays the Intellispec event history including:

- User log in and log out information
- Notification when the part program was changed. Note: detailed changes to parameters and program changes are found in the Part Program Change Log
- Alarms, when triggered and cleared
- System errors
- System starting information
- Lane online/ offline history
- Lighting changes
- Reports generated
- Text files of the logs are stored at: C:\Pressco\Logs.

Log Reader

Delete All

Configure

Tools

Filter

	Date	Time	Lane	Message	User	Online	Part Program	Alarms ^
Fri	2023-10-20	14:21:11	(1) Lane 1	Built on operating system: Microsoft Windows NT 11.0.22621.0	Not logged in	Offline	Testing-junk111822	
Fri	2023-10-20	14:21:26	(0) System	Was not able to connect to a UPS.	Not logged in	Offline		
Fri	2023-10-20	14:21:26	(0) System	Power switch is in an unknown state. Please check COM ports and ...	Not logged in	Offline		
Fri	2023-10-20	14:21:41	(0) System	User 'Administrator' has logged in.	Administrator	Offline		
Fri	2023-10-20	14:21:41	(1) Lane 1	User 'Administrator' has logged in.	Administrator	Offline	FHCP3X Master	
Fri	2023-10-20	14:21:43	(1) Lane 1	System went online.	Administrator	Online	FHCP3X Master	
Fri	2023-10-20	14:21:53	(1) Lane 1	System went offline.	Administrator	Offline	FHCP3X Master	
Fri	2023-10-20	14:44:11	(1) Lane 1	Part program changed to 'FHCP3X Master (Copy)'.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Percentage of Defects too High' was cleared.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Percent Defects' was cleared for camera 1.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Excessive Defects' was cleared for camera 1.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Excessive Warnings' was cleared for camera 1.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Consecutive Defects' was cleared for camera 1.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Percent Defects' was cleared for camera 2.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Excessive Defects' was cleared for camera 2.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Excessive Warnings' was cleared for camera 2.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Consecutive Defects' was cleared for camera 2.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Percent Defects' was cleared for camera 3.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Excessive Defects' was cleared for camera 3.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Excessive Warnings' was cleared for camera 3.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:14	(1) Lane 1	Alarm of type 'Consecutive Defects' was cleared for camera 3.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:44:33	(1) Lane 1	Inspection with ID 1390 and name 'Fill Height' was created.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:48:33	(1) Lane 1	Inspection with ID 1390 and name 'Fill Height' was deleted.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:48:47	(1) Lane 1	Inspection with ID 1391 and name 'Fill Height - Segmented' was cre...	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:51:43	(1) Lane 1	Inspection with ID 1392 and name 'Neckring Registration' was creat...	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	14:58:13	(1) Lane 1	Inspection with ID 1393 and name 'Pattern Difference' was created.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	15:02:27	(1) Lane 1	Inspection with ID 1394 and name 'Distribution' was created.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	15:14:59	(1) Lane 1	Inspection with ID 1394 and name 'Distribution' was deleted.	Administrator	Offline	FHCP3X Master (Copy)	
Fri	2023-10-20	16:21:19	(1) Lane 1	Alternate Part Processing has been enabled.	Administrator	Offline	FHCP3X Master (Copy)	

Navigate

←

Next System Start

→

↔

⬆

⬇

⬇

🌐

✓

Sensor Missed Statistics

Displays the number of missed parts and missed part tracking for the sensor. From Lane or Sensor Overview mode, select Tools | Reporting | Sensor Missed Statistics. This information is recorded in the Log Reader.

Missed Parts / Results

Missed Result

No Missed Results

Missed Part

No Missed Parts

Lost Part Tracking: 0

Part Tracking Closed: 0

Clear All?

✓

✗

Missed Results - This can occur if you set the Reject Delay Calibration incorrectly. Another cause could be kinks or intermittent connections to cables, or the inspection time for the lane is too long.

Missed Part - This can occur if the inspection time is too long. That is, the system may still be processing another part when the next part comes through the inspection module. Check the Timing Trend in Sensor Overview mode to see whether one sensor's inspection time is much longer than another sensor. Your inspection regions might be too large, or you may have a setting enabled that causes the inspection to take too long.

Lost Part Tracking - This occurs if the system loses connection to the Part Tracker. You may be able to change the Missed Packets Exception threshold to prevent loss of connection.

For troubleshooting help, we recommend contacting Pressco.

Error Messages

Part Tracker Exception

If you see an error "Part Tracker Exception" on the Intellispec screen, this means that power was lost to the Cluster Box or Part Tracker.

To reset the part tracker board:

Push the Reset button on the part tracker board. This is found inside the inspection module or Cluster Box.

Lost Part Tracking

If you see a "Lost Part Tracking" message, possibly the power was lost to the Cluster Box or Part Tracker inside an inspection module. Reset the Part Tracker board as described above.

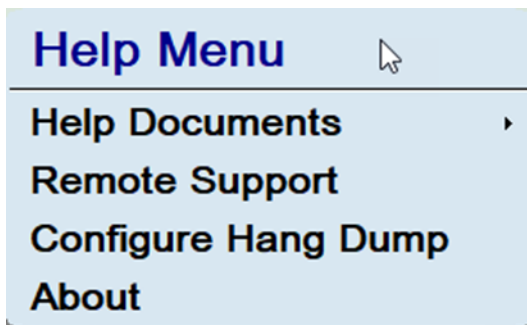
Chapter 9 Help and Support

Help



Select the Help icon to:

- use the system manuals
- access Pressco remote support
- Configure a hang dump (for administrators - troubleshooting purposes). This is only shown if it is enabled.
- obtain your current software version



To access the user manuals:

1.  Select the Help icon.
2. Select Help Documents, then select a manual from the list. The user manual is displayed.

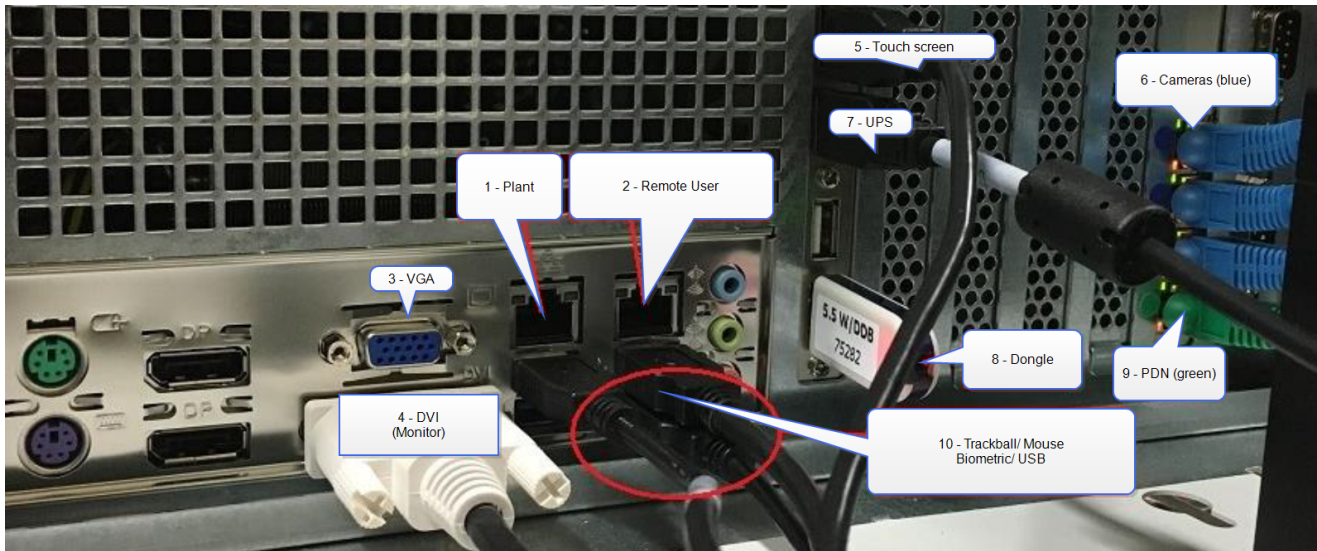
Remote Support

Each Pressco system is equipped with iTivity and Team Viewer agent software that provide a safe and effective means of allowing remote support connections to the system. These allow Pressco engineers to access your Pressco system remotely, and assist with troubleshooting and optimizing system performance.

To use remote support, you must provide an Ethernet connection to the Pressco and outgoing Internet access to the specific support server, described in the ["Intellispec iTivity remote support" on page 91](#) and ["Teamviewer" on page 93](#) topics.

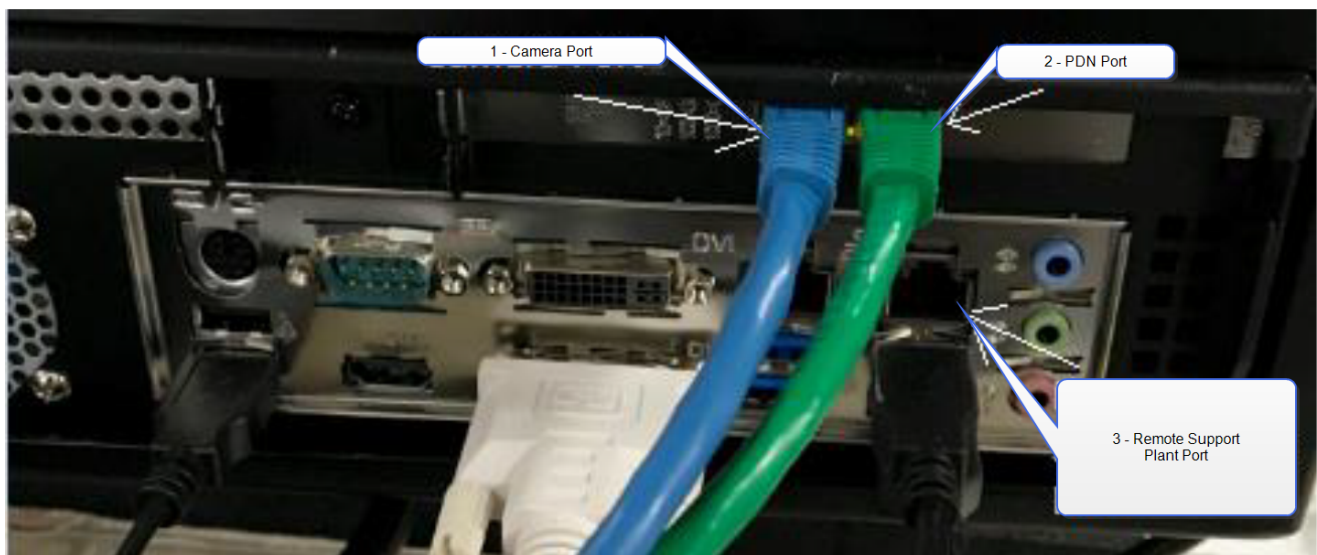
The images below show the typical layout of the Intellispec Ethernet ports. Either the Plant or Remote User ports can be used for the remote support connection. Those ports default to "Get IP Address Automatically" but they can be assigned a fixed IP address to accommodate your network requirements.

Series V ethernet ports:



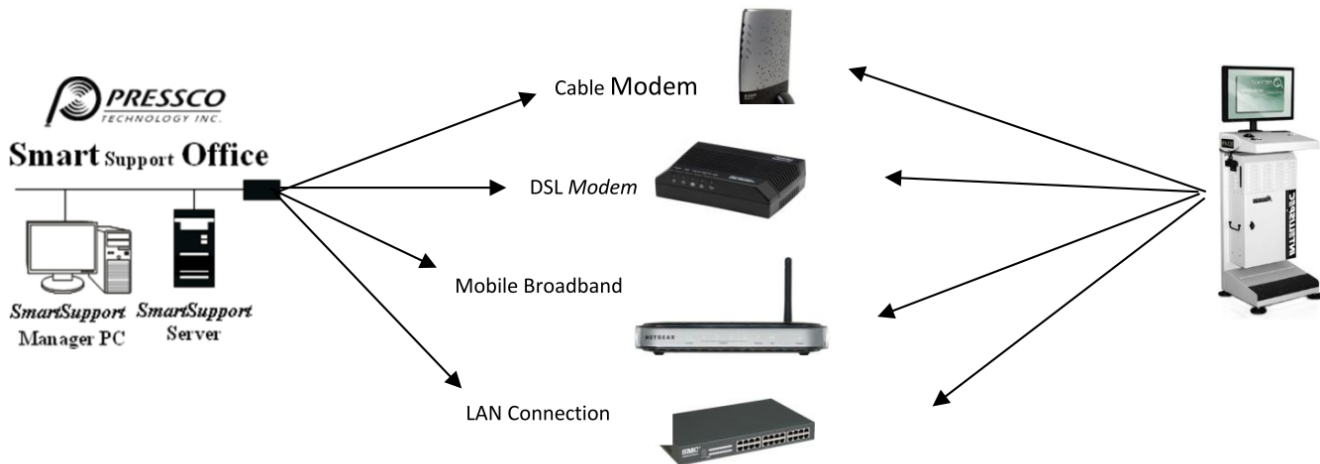
- 1) Plant
- 2) Remote User
- 3) VGA
- 4) DVI (Monitor)
- 5) Touch Screen
- 6) Cameras (blue)
- 7) UPS (Uninterruptible Power Supply)
- 8) Dongle
- 9) PDN (Pressco Data Network) (green)
- 10) Trackball/ Mouse/ Biometric/ USB

CSL system ethernet ports:



- 1) Camera Port
- 2) PDN Port
- 3) Remote Support Plant Port

Connection Methods: The remote support connection can operate over a variety of networks. However, these are image and video based systems so the higher the bandwidth available the better we will be able to navigate through the system and assist with any issues you encounter.



Intellispec iTivity remote support

Remote Support allows remote access to the Intellispec software. iTivity software is used by Pressco to provide remote system support if a Maintenance Agreement is purchased for that Intellispec system.

Each Intellispec™ system is equipped with iTivity agent software that, when initiated, will establish an encrypted connection to a server located behind the Pressco firewall. This allows Pressco engineers to access your Intellispec system remotely. Only registered members of the Pressco support team can gain access to the remote support server.

To use remote support, you must provide an Ethernet connection to the Intellispec system, and outgoing Internet access to support.pressco.com via port 23800. If you do not have a DNS, Pressco can provide you with the IP address of the remote support server. If connecting through a firewall you will need to add a rule allowing outgoing access from the Intellispec's IP address to support.pressco.com:23800. All other connections can remain blocked.

Once the session is established, the Intellispec system shows up on Pressco's server and is identified by the serial number of the system. Our Engineers can then connect and offer assistance.

To request a Pressco support session:

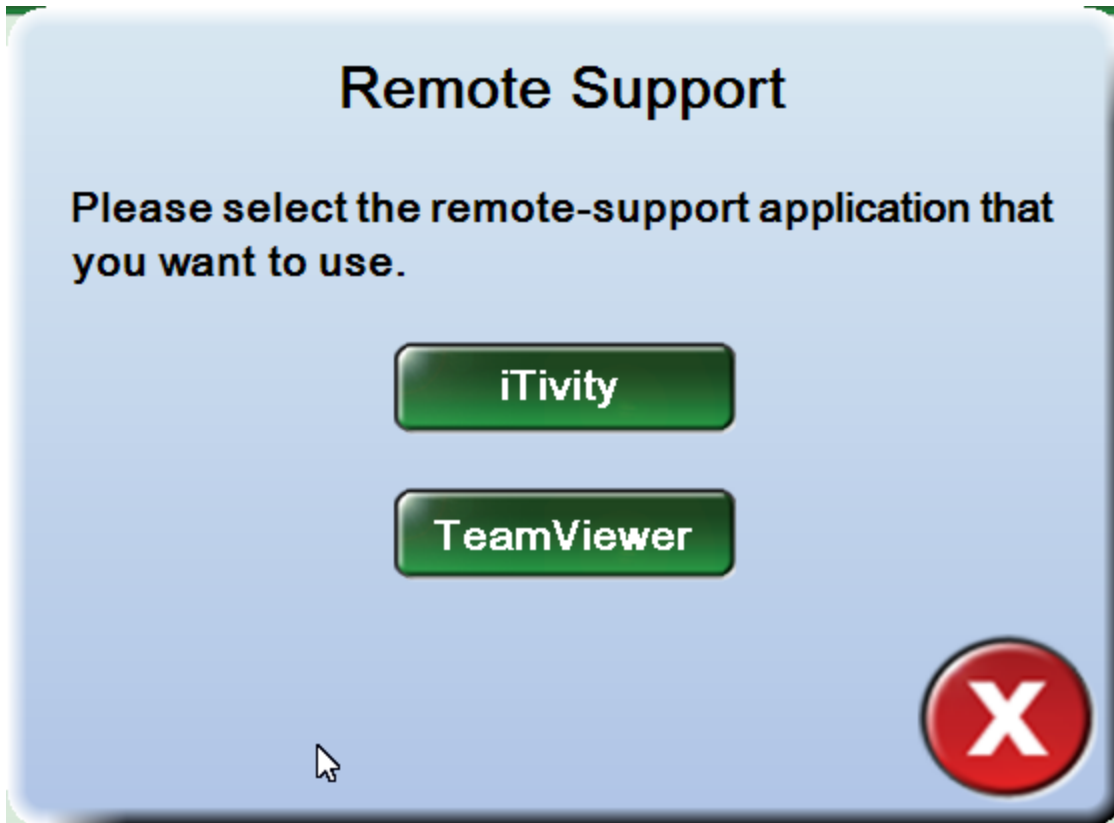
Contact Pressco support. Provide the serial number of the system that needs to be accessed. Pressco will log into your Intellispec system and perform troubleshooting as necessary.

You will need:

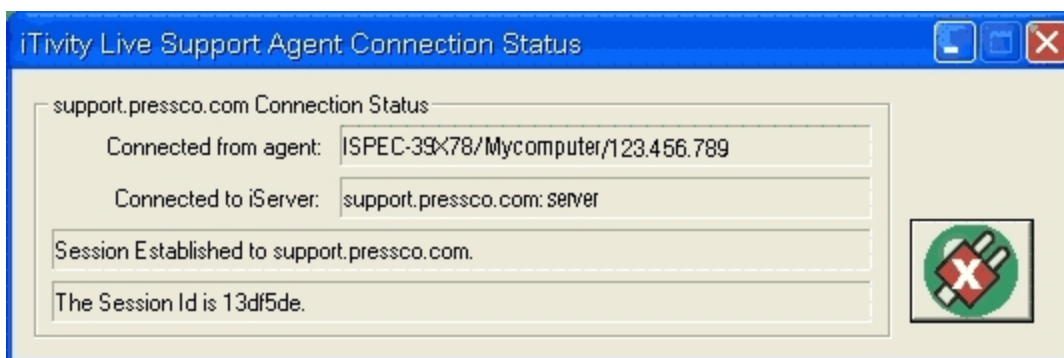
- A functioning Intellispec (systems without power, or systems that are not capable of running Intellispec software, cannot be remotely accessed)

To use Remote Support:

1. Notify a Technical Support representative that you require remote support. You will need to identify yourself, your location, and the Intellispec to which he should connect.
2.  In the Intellispec software, Select Help | Remote Support.



3. Select the iTivity button. If your system has a valid internet connection, the iTivity agent will attach to the server at Pressco. A connection status screen will appear indicating that the session has been established, as shown below. Intellispec systems are identified by computer name, which, in most cases, is the serial number.



4. When the Tech Support representative is finished, he will disconnect your Intellispec from the remote session.

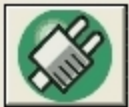
If you need to disconnect your Intellispec from the remote session yourself, follow the steps below.

To disconnect from remote support:

1. Select the X in the upper right corner of the 'iTivity Live Support Agent Connection Status' box.
2. When the system asks "Do you really wish to exit the iTivity Live Support Agent?" select OK. The system will be disconnected.



Note: if you select this button, the session will be disconnected, but this does not close the remote support program.



If the session is disconnected and you want to allow Tech Support to be able to access your system again, select the button.

support.pressco.com Connection Status

Agent disconnected: ISPEC-39X78/Mycomputer/123.456.789

Disconnected from iServer: support.pressco.com: server

Not Connected.

The Session Id is 1ab1b77.

Teamviewer

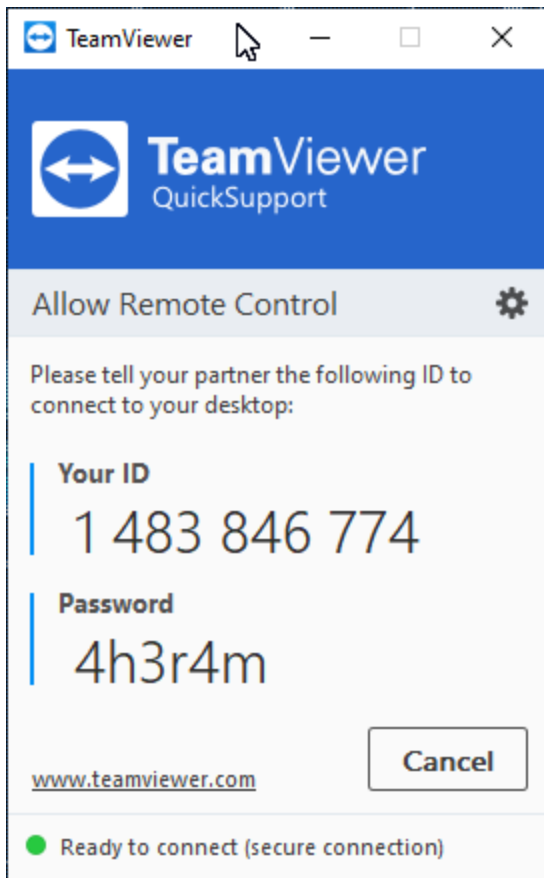
Each Intellispec™ system is equipped with Team Viewer agent software.

Team Viewer is installed at the Pressco factory on the Intellispec system, in systems with version 5.7 software and higher.

To use the Team Viewer connection method, the Intellispec will need outgoing Internet access to TeamViewer.com via port 5938. Firewall rules may need to be set to allow outbound traffic over port 5938.

To initiate a Pressco support session:

1. Launch Team Viewer: go to Help | Remote Support | TeamViewer. When the connection is established you will see a dialog box with an ID number and password. Those are the logon credentials needed for others to gain access to that computer.



2. Contact Pressco support, via email, support chat, text message, or by phone call. See below.
3. Notify Pressco with the TeamViewer ID and Password. Pressco will log into your Intellispec system, and perform troubleshooting or maintenance as necessary.

Request technical support and remote support: techsupport@pressco.com

24/ 7 Customer Support (for urgent system help): +1-440-498-2000

About Intellispec

Use this screen to view the Intellispec software version, options installed, and information about your system. A Pressco technical support representative may need this information to help troubleshoot your system, when necessary.



To access this screen, select Help | About.

Note: in software versions 6.0.035 and higher, the text may appear in different colors. The system does a check of the hardware.



Items shown in green text are working.



Items shown in red are not working.

About Intellispec Series 6



Version: 6.0.034 (Windows 10, 64 bit)
Summary for Lane 'LANE'

Part Tracker

Type

Extended I/O

IP Address

MAC Address

FPGA Version

Firmware Version

Eight Channel

None

0.0.0.0

00-00-00-00-00-00

0x00

0x0000

Main

Grayscale Camera

IP Address

MAC Address

1228 x 924 x 256

0.0.0.0

00-00-00-00-00-00

Color 1

Color Camera

IP Address

MAC Address

640 x 480 x 256

0.0.0.0

00-00-00-00-00-00

Color 2

Color Camera

IP Address

MAC Address

640 x 480 x 256

0.0.0.0

00-00-00-00-00-00

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Backup and Restore Menu



This section includes information about creating a support package as a backup, and restoring the system from a support package.



Note: Some items are available only to advanced users

- 1) "Create a Support Package" below
- 2) Restore from Support Package
- 3) Launch Windows Explorer - *Administrator only* - Opens a Windows Explorer window so that you can browse, move, and edit contents on the computer.
- 4) Disk Imaging Software - this is the Acronis backup software

Create a Support Package

A support package is a set of files gathered by the Intellispec system to help find system problems. You will send this package to Pressco service specialists so that they can troubleshoot your system. This file can also back up your system configuration (not the entire system database).

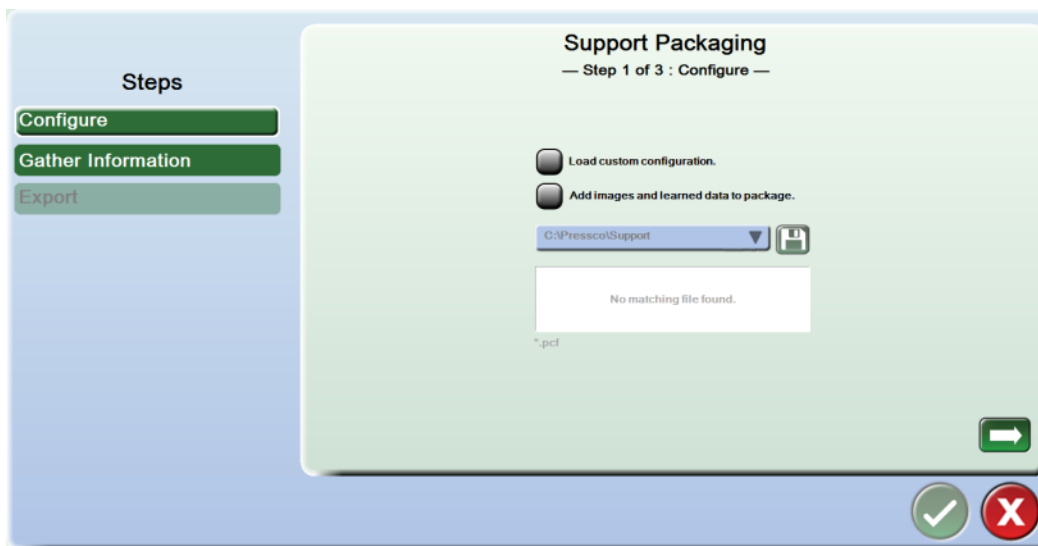
*Note: On rare occasions, the Intellispec software cannot be started, so you will not be able to access the support package tool from the user interface. It is possible to create the support package without Intellispec running by starting the following executable from Windows:
C:\Pressco\bin\SupportPackaging.exe.*

What you need:

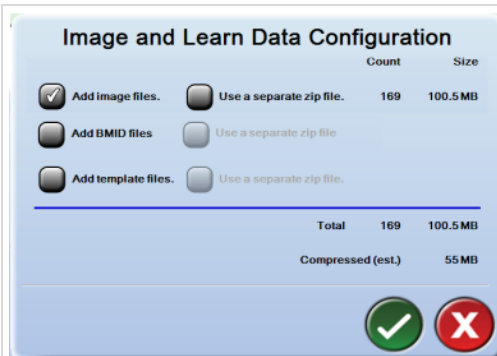
- USB flash drive (128MB or larger). Connect this to the USB port
- If you have a ".pcf" file from a Pressco Support representative (to acquire additional system information), then copy that file to the USB drive prior to connecting it to the Intellispec system
- If you want to save images to send with the support file, then save images prior to creating the support file. Be sure to save them in the default image folders: C:\Pressco\Lane n\Images\Sensor n. See Saving Images.

To create the support package:

1.  Select the Backup and Restore Menu | Create Support Package. The support package wizard is displayed.
2. (optional) At Step 1: Configure: add the ".pcf" file or images.



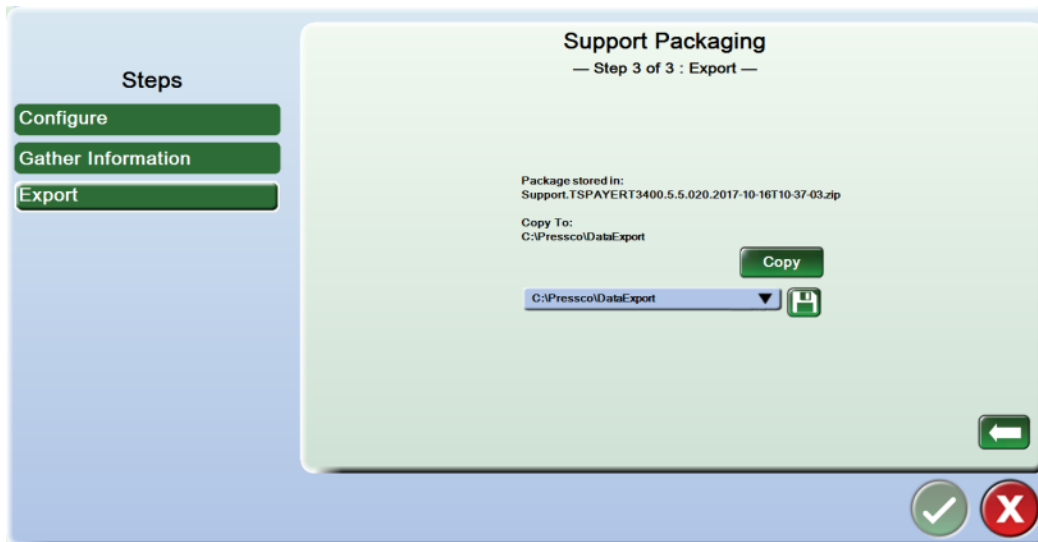
3. (optional) Check the Load custom configuration box. A .pcf file is a custom Pressco configuration file that gathers information beyond the standard Support Package. If a Pressco Support representative sent you a .pcf file, then connect the USB device that contains the .pcf file. Select the disk icon and browse to the location (USB drive) where the .pcf file is stored. The system locates the .pcf file.
4. (optional) Check the Add images and learned data to package box. A dialog (shown below) allows you to choose the type of images to include.



- **Add image files** - select images in the default image folder (example: C:\Pressco\Lane 1\Images\Sensor 1). All sensors and lanes for which you have images are included.
- **Use a separate zip file** - a zip file with "IMAGES" in the name is created along with the Support Package zip file. All sensors and lanes for which you have images are included. If you do not check this box, then the images are included in the main Support Package zip file.
- **Add BMID files** - if you have an inspection using BMID correlation, the images from the BMID folder are included (example: C:\Pressco\Lane 1\BMID).

- **Add template files** - if you have a Template Registration or Template Orientation inspection, the images from the InspectionTemplates folder are included (example: C:\Pressco\Lane 1\InspectionTemplates).

5. Follow the instructions on screen. Use the forward arrows to move to the next screens.
6. When the steps are completed, verify that the Step 3: Export screen is displayed.

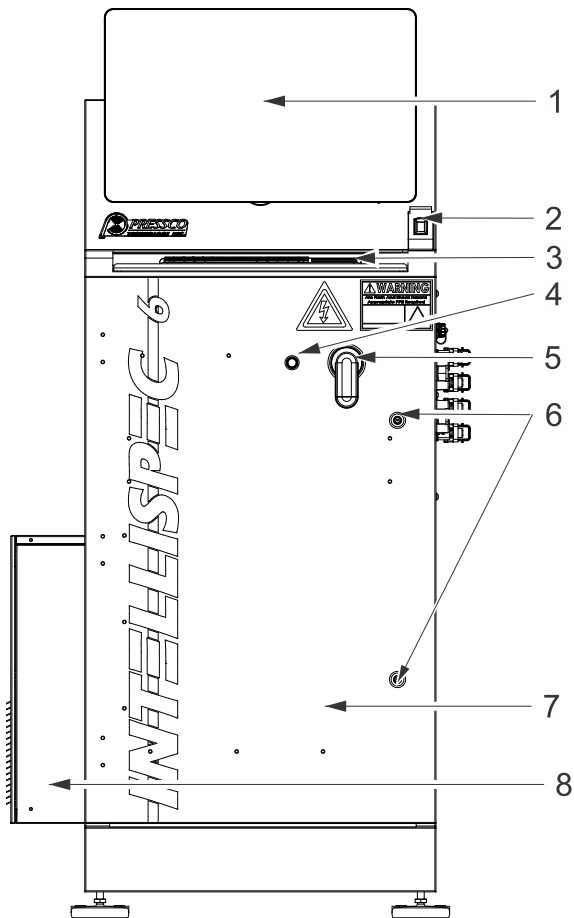


7. Select the USB Flash Drive in the "Copy to:" location.
8. Select the Copy button. The support package files are copied to the USB flash drive, then a "Copy Succeeded" message is displayed.



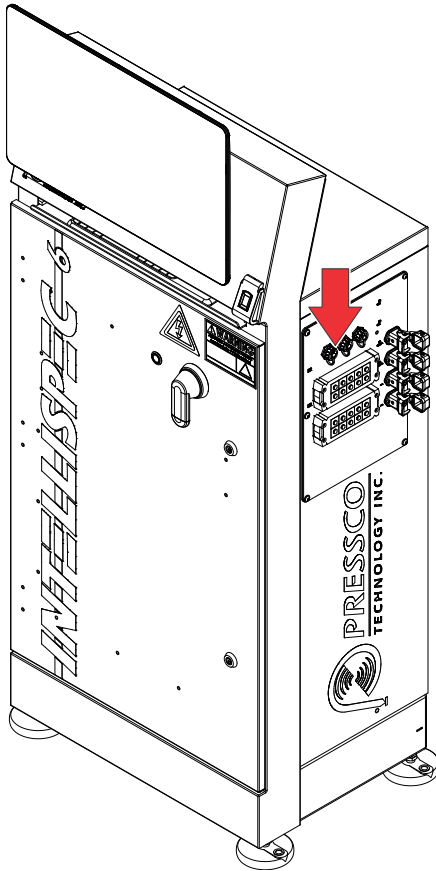
9. Select the OK button to continue.
10. Select the OK button at the bottom of the Support Packaging screen to exit.
11. Remove the USB flash drive.
12. Copy the files that were saved, including images, from the USB drive to your computer.
13. Send an e-mail to techsupport@pressco.com and attach the support package files. Pressco service/ tech support will respond within one business day, if possible.

Chapter 10 Control Enclosure and User Interface



- 1) Touch screen monitor
- 2) Biometric login device
- 3) Keyboard tray
- 4) Power indicator LED
- 5) Power switch
- 6) Locks ("Accessing the Internal Components with the Power Off S6" on page 102)
- 7) Vision processor (inside the control enclosure)
- 8) Air conditioner

USB Ports S6



There are USB ports available to back up or transfer data



The USB port is not for charging your phone! Only use these ports to import or export data.

Use the USB ports when you are:

- Importing or Exporting Part Programs from another system
- Exporting user accounts
- Importing user accounts
- Creating a Support Package
- Saving images, especially to send with a support package

Biometric Login Device

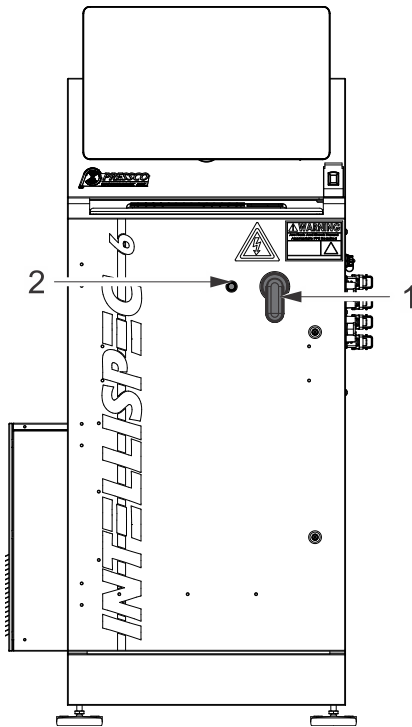
The Biometric Identification login device is used to log in and out of the Pressco system. This device is optional and must be purchased with the system.



To log in with this device, press your finger to the device. The following are conditions for use:

- You must use the same finger as initially set up by your administrator
- If you do not know how your account was set up (or which finger you used), contact your administrator
- If, after three tries, the Pressco does not recognize your finger print, you must log in using the On Screen Keyboard (OSK)

Power On and Off at the Control Enclosure



Power on: Turn on the switch [1] on the front of the cabinet. The power indicator [2] will illuminate. The software will start automatically. (You must log in and put the system online to begin inspection)

Note: it takes about a minute for the computer to start after the main power switch is turned ON

Power off: Turn off the switch on the front of the cabinet. The system, including the computer, shuts down. The UPS shuts down.

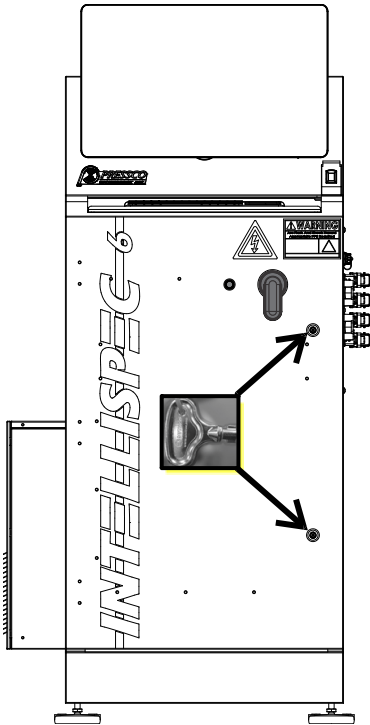


WARNING - When you shut down power using this switch, there is still voltage present on the UPS inside the unit until it discharges.



Important - If you want to restart the system, turn off the power, let the software and components completely shut down, and leave the power off for about one minute before turning it back on. This allows the electronic components to correctly reset.

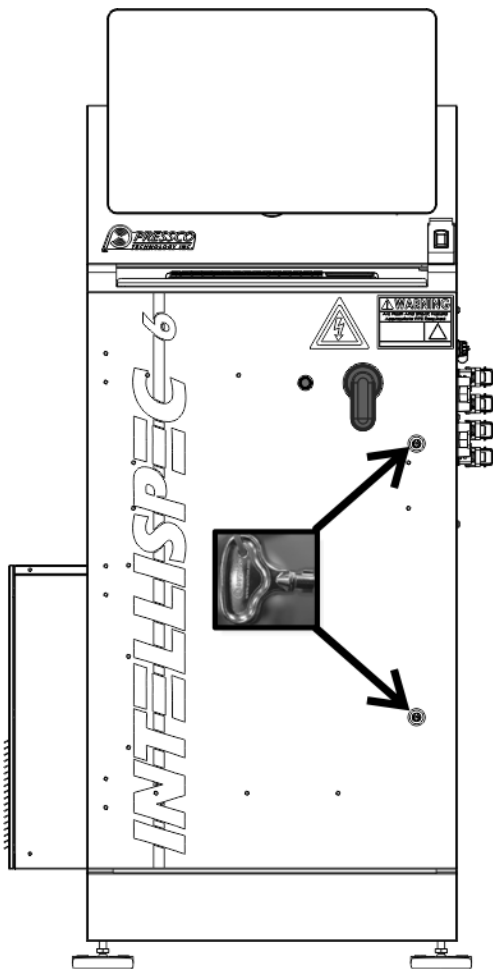
Accessing the Internal Components with the Power Off S6



To access the components inside of the control cabinet, you will need the keys (supplied by Pressco).



WARNING - When the system is powered down, there is still voltage present at the UPS. Only **AUTHORIZED PERSONNEL** should attempt to open the system. We recommend that only **AUTHORIZED PERSONNEL** have access to the keys.



To access the components inside of the control cabinet, you will need the keys (supplied by Pressco).



WARNING - When the system is powered down, there is still voltage present at the UPS. Only **AUTHORIZED PERSONNEL** should attempt to open the system. We recommend that only **AUTHORIZED PERSONNEL** have access to the keys.

Lockout Procedure

To prevent power from being applied while the cabinet door is open:



1. Make sure the handle is in the OFF position
2. Push the red piece of the handle out from the back
3. Secure up to three locks

Accessing the Internal Components with the Power On

The disconnect switch has an override feature allowing you to open the cabinet door while the switch is in the ON position.



WARNING - Only *AUTHORIZED SERVICE PERSONNEL* should access the inside of the computer while the power to the unit is still applied.

1. Use a small, blunt tool to press the small button on the left side of the handle. A 3/32" or 2.5mm allen key works best, but you can use a ball point pen.



Do not use a sharp tool to press the button.

2. Open the cabinet door.



Warning - live voltage is present within the cabinet.



Rebooting the Intellispec System

You may need to reboot the system if power or communication has been lost between the Vision Processor and the Cluster Box (if applicable) or inspection modules.

Symptoms may include that the inspection module light has stopped flashing, and the system is no longer taking pictures. Rebooting the system will reconnect the Vision Processor with the Part Tracker.

Note: if the power to both the Vision Processor UPS and the Cluster box is interrupted for more than two minutes, the software will automatically shut itself down and then shut down the Vision Processor PC. The software will restart. You will just need to log in and put the system back online.

Restarting the system

If your system has stopped communicating, or the software has stopped operating, we recommend that you restart the whole system. This will reset the software, the inspection module, and all the communication devices of the system.

To restart the system:

1. Turn off the main power switch (DISC 1). The system will shut down, including a controlled shut down of the software.
2. Wait until the software and all the components have shut down, and then wait for about 40 more seconds to allow the electronic components to reset.
3. Turn on the main power switch (DISC 1). The system will start, and the Intellispec software will load. Log in to begin using the system.

Note: The system restart takes several minutes to complete.

If the system restart does not fix the problem, try one of the solutions below, or contact Pressco.

"Copyright Notice / Contact Us" on page 2

Restarting the Software Application

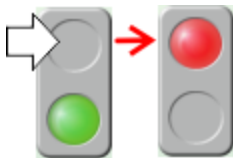
You may need to restart the software if you see a software error that, for some reason, may not have been cleared by restarting the entire system.

You must have proper user permissions to exit the software. This prevents unauthorized system shutdowns. Contact your system administrator if you need user permissions.

Important - When restarting the software, it is important to choose the correct option from the Shut Down System menu. Only select Shut Down Intellispec and Restart Computer as described below.

To restart the Intellispec software:

1. Log in.
2. Take the system offline. (Repeat for all lanes if they are online)



3.   Exit the software: Home | Tools | Shut Down Intellispec and Restart Computer.
4.  Click the OK button. The Intellispec software and computer shuts down and restarts. Your system may be configured to go online at startup. Otherwise, the software will come up in System Overview mode where you can log in to continue operating the system.

Rebooting the computer

If restarting the software application does not clear the errors, or the software does not restart, or you see the "System in Transition" message, try rebooting the computer.

To reboot the computer:

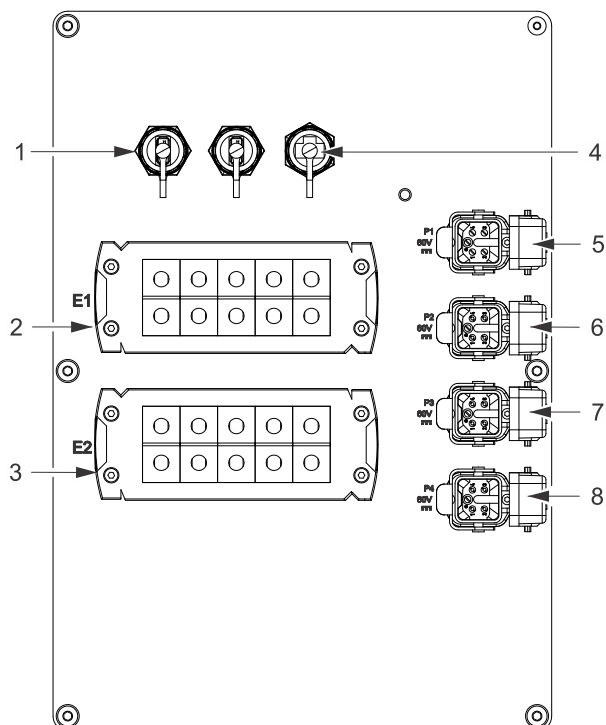
1. Press Ctrl + Alt + Delete on the keyboard.
2. Use the Log Off option to log off of Intellispec.
3. At the Windows Login Prompt, enter "pypass" as the password for the Intellispec user account. Once login is complete the application software will be launched.

Note: The system reboot takes several minutes to complete.

Cabinet Components

External Connections

The connectors are on the side of the Intellispec Series 6 cabinet.



- 1) USB1 and USB2 - for data transfer
- 2) E1 block connector - inspection module connections
- 3) E2 block connector - inspection module connections
- 4) Ethernet connector
- 5-8) P1 - P4 connectors - 60 VDC out to inspection modules

4-Light Tree

The lights on the optional light tree will turn on, off, or blink depending on status of certain hardware. Each lane has its own light tree.

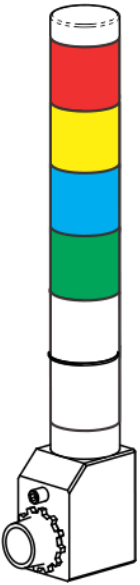
Note: the light tree on your system may look different than the picture shown

4-Light Tree	Light color	Condition	What it means
	Red	On - steady	Alarm condition
	Red	On - blinking	Part tracker board lost communication with the host PC or has an error and needs to initiate an alarm
	Red	Off	No alarm (OK)
	Amber	On	Warning alarm condition
	Amber	Off	No warning (OK)
	Amber	0.5 second flash	System automatically resets Asynchronous Correlation FIFO (not used in all systems)
	Green	On	Lane is online
	Green	Off	Lane is offline
	Blue	On	Part tracker board has power (OK)
	Blue	Off	Part tracker board has no power

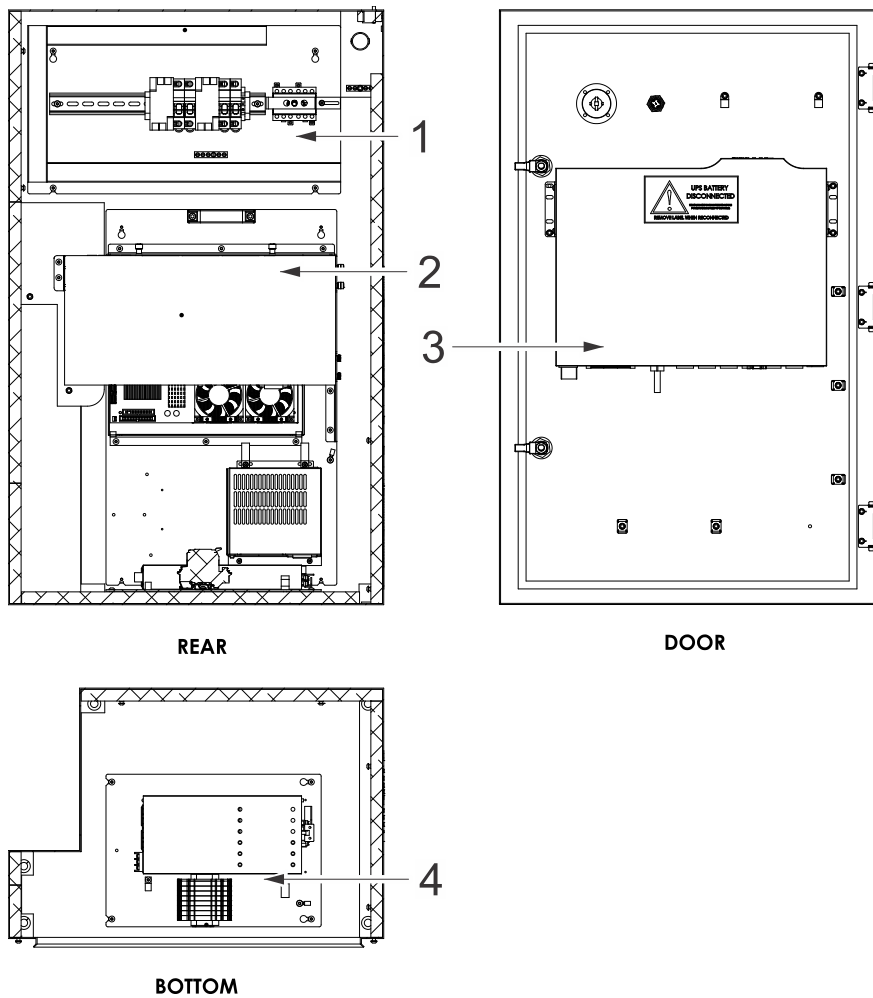
5-Light Tree (Optional)

The lights on the optional light tree will turn on, off, or blink depending on status of certain hardware. Each lane has its own light tree.

Note: the light tree on your system may look different than the picture shown

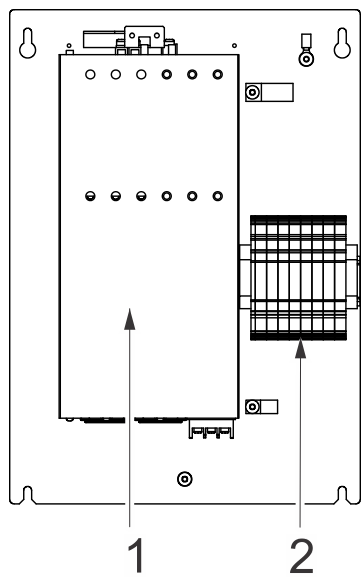
5-Light Tree	Light color	Condition	What it means
	Red	On - steady	Alarm condition
	Red	On - blinking	Part tracker board lost communication with the host PC or has an error and needs to initiate an alarm
	Red	Off	No alarm (OK)
	Amber	On - steady	Warning alarm condition
	Amber	Off	No warning (OK)
	Amber	0.5 second flash	System automatically resets Asynchronous Correlation FIFO (not used in all systems)
	Blue	On	Not assigned
	Blue	Off	Not assigned
	Green	On - steady	Lane is online
	Green	Off	Lane is offline
	White	On - steady	Power On (Part tracker board has power)
	White	Off	Power Off (Part tracker board has no power)

Internal Components



- 1) Power Entry Panel, including terminal block TB1
- 2) Vision Processor Assembly
- 3) UPS (Uninterruptible Power Supply)
- 4) DC Power Panel, including terminal block TB2

DC Power Panel



- 1) POWER SUPPLY 60VDC 1000W, 85-264VAC 47-440HZ
- 2) TB2 DC POWER S6

Fuse Replacement

The fuses are located in Terminal Block TB2, which is located on the bottom panel of the control enclosure



WARNING - For continued protection against fire hazard, replace fuses only with the same type and ratings. The use of other fuses or materials is prohibited.



WARNING - Disconnect the product from the mains supply before replacing the fuse(s).

For fuse rating, refer to the table below.

Pressco part number	Fuse	Value	Location
77915 Fuse Kit	FU1 - FU8	FUSE 5A TIME DELAY 5X20MM	bottom panel

Chapter 11 Maintenance Frequency

Item	Description	Frequency
Observe proper rejection	Verify that defective parts are being rejected by inserting a known defective part through inspection	Daily
Observe Proper inspection	Verify that no stray parts are stuck in or near the inspection module or reject station	Daily
Observe Proper inspection	Verify that no buildup of dirt or contaminants has occurred on inspection module. Clean if necessary.	Daily
Observe Proper inspection	Verify that each camera's image is properly centered, focused, and properly lit. Adjust if necessary.	Daily
Glass surfaces	Clean with soft, clean, oil-free cloth dampened with glass cleaning solution	Daily
Plastic surfaces	Clean with soft, clean, oil-free cloth dampened with mild soap and water solution	Daily
Part Detect Sensor and Reflector	Clean with soft, clean, oil-free cloth dampened with mild soap and water solution. Wipe dry.	Weekly
Create a Support Package	Create a snapshot of your Intellispec settings.	Monthly
Clean the Control Cabinet Filters	Rinse in clean water; use mild soap and water solution if oily.	Monthly
Acronis Backup	Create a full System Backup.	Yearly

Note: please refer to the manual for your inspection module(s) for maintenance procedures

Maintenance Cautions

When carrying out maintenance or repair work:

	Disconnect master switch. For switch locations, refer to the Power Up and Power Down section.
	Before starting the machine, ensure that no person is close to the machine.
	If maintenance or repair requires the disconnection or removal of safety or protection systems, this operation must be supervised by authorized personnel who must ensure the prevention of personal injury or damage to the machine. All machine movements must be performed with limited speed and limited movements.
	Maintenance or repair work on electrical components must be carried out exclusively by authorized, trained personnel. When running tests with power connected, you must strictly comply with the rules provided.
	Personnel working on higher parts of a machine must wear a harness and hook it on to the structure and must always move with extreme caution.
	Never perform lubrication or maintenance procedures on mechanical parts with the machine running.

LED Caution:



CAUTION - Possible hazardous optical radiation from LEDs. Do not stare at lamps.

Clean the Control Cabinet Filters

The filter should be cleaned once a month for best results. The filter is located on the side of the cabinet. Replace with a new filter when necessary.

Note: You may need to clean the filters weekly depending on plant conditions

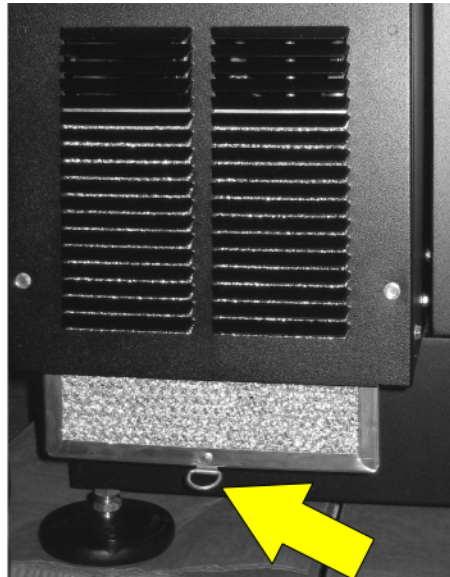
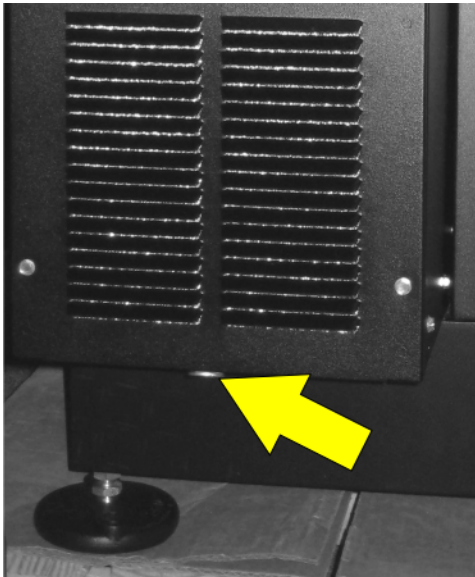
What you need:

Recommended: "RP Super Filter Coat Adhesive." Find this on the Internet or in a hardware store near you.

To clean the filter:

1. Pull the ring on the bottom of the filter cover, and pull the filter down to remove it. (see photo below)
2. Remove the filter and clean it. DO NOT use caustic solutions.
 - If the filter contains dry dust and dirt, flush the filter with warm water from the exhaust side to the intake side
 - If the filter contains oily dust and dirt, clean it in soapy water, then rinse in clear water
3. Dry the filter completely [placing it with a corner down will assure complete drainage].

4. Recoat the filter with "RP Super Filter Coat Adhesive." Spray both sides for best results.
5. Place the filter back inside the filter cover.



Cleaning Optical Surfaces



Important - Debris and contamination could build up on both the glass and plastic surfaces. This dirt could appear in the inspection windows, causing false rejects of parts, or it could degrade lighting. Clean glass and plastic surfaces often to avoid false rejects.

To maintain proper image quality and system performance, the clear glass and plastic surfaces on the Inspection Modules must be cleaned on a regular basis. Dirt and debris that appear in the image can cause false rejects. An oily film on optical surfaces can cause false rejects or missed defects.

Cleaning Glass Surfaces

Glass surfaces that may require cleaning are:

- Camera Lens
- Beam Splitter (if present)
- Secondary lens (if present)
- Secondary mirror (if present)

To clean glass surfaces:

- Blow off dust with canned, compressed air
- Use a clean non-abrasive cloth dampened with lens cleaning solution
- Use lens tissue and lens cleaning solution on camera lenses
- If surface has compound on it, first clean with alcohol, then with lens cleaning solution

Note: Cleaning frequency will depend on plant and process conditions.

Cleaning Plastic Surfaces - general

Note: Cleaning frequency will depend on plant and process conditions.

To clean plastic surfaces:

- Use canned compressed air to blow away dust
- Use a clean, non-abrasive cloth dampened with mild soap and water solution. Saturate surface completely to let particles wash away.
- Dry the surface with clean, compressed air



DO NOT: Use paper towels, paper napkins, or dry cloths – these may scratch surfaces