SPAN
Vision Melodies

Countbeat

Innovative Tablet / Capsule Inspection System for Counting Machine

Countbeat

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Powered by SPAN Vision Studio
single operational environment for vision applications

UNIQUE FEATURES

"Industries First Auto Teaching with 3D Model Camera & single button teach for all cameras"

"Auto-Learning of Acceptance Tolerance"

"No need to change vibratory plate for inspection"

"Best Quality Hardware"

"Air Based Rejection Mechanism"

INTRODUCTION

Years of experience put together in an attempt to offer pharmaceutical industry a melodious experience working with Tablet / Capsule Inspection System on Electronic Counting Machine - **Countbeat**. Inspired by real challenges that user faces while using inspection system. Countbeat is equipped with a supercomputing power for inspecting tablets / capsules while they are travelling freely on the V-shaped OR U-shaped vibrating plates of counting machine.

Powered by proven image processing algorithms designed, developed and optimized specifically for inspection of tablets / capsules on bulk packing lines.

Countbeat eliminates user dependency during teaching process of new product recipe by offering completely automated teaching process with 3D model camera which automatically identify dimension of tablet / capsule. Auto-teaching also identifies channels, colour of product and sets tolerance automatically.
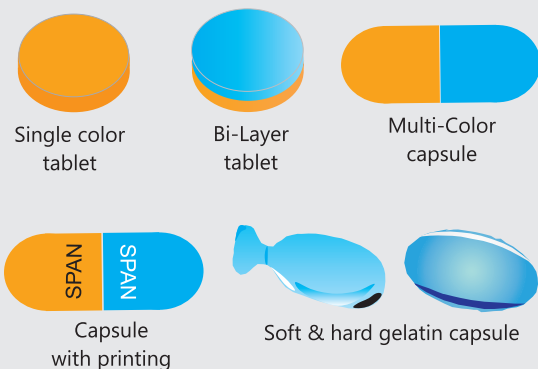
COUNTBEAT SOFTWARE
- Morden 'Tile' based finger friendly user interface for organized look.
- Different colour marking for different defects type. This provides easy differentiation of various defects categories.
- Powered by 'Vision Studio', a propriety Vision OS capable of handling multiple applications and cameras in single operational environment.

SUPPORTED PRODUCT CATEGORY

Single color tablet

Bi-Layer tablet

Multi-Color capsule

Capsule with printing

Soft & hard gelatin capsule

DEFECTS CATEGORY

Good Product

Good Product

Broken

Size variation

Shape variation

Color / black / white spot

Color variation

Foreign in cavity & foil

Lock open

Double cap

Cap / body missing
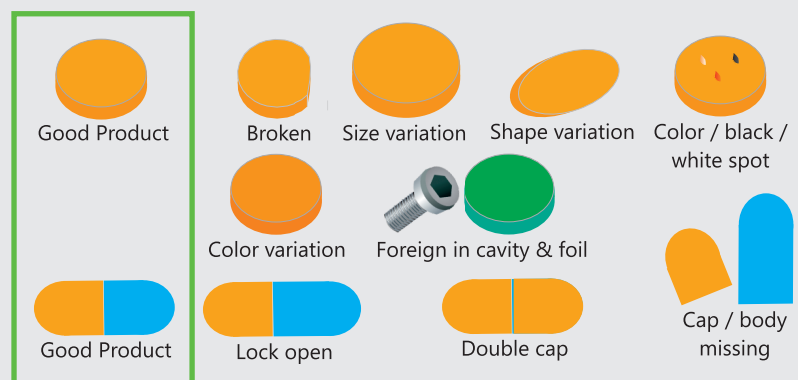
FEATURES

SOFTWARE
- Auto-teaching which takes not more than 10minutes to create new recipe. This eliminates user dependency.
- Real-Time tracking of individual tablets throughout the inspection area, this is essential for reliable rejection signal.
- Strong splitting algorithm to split adjusting connected tablets / capsule.
- Smart product color identification tool for easy product segmentation as an option to auto-teaching.
- Software alarm followed by machine stop on powder accumulation on vibrating plate beyond certain limit.
- Countbeat is equipped with 3D model camera so that software automatically calculates dimension of product.
- Smart lens focusing utility, for precise lens focusing. Also eliminates user dependency of lens focusing.
- Bult-in help video tutorials which helps user to lean the software.

HARDWARE & OPTICS
- Ful Ip65 HMI for dust proof operation.
- Compact size illumination & camera unit, can be mounted on the machine side wall itself.
- Lens with screw-less vibration proof focus and aperture ring.
- High FPS camera for efficient tracking at maximum speed of machine.
- Polorized LED light which avoids reflection of product on SS finished vibrating plates.
- LED light in high frequency strobing mode for efficient cooling.

INTEGRITY
- Countbeat can be integrated on all type of vibratory based electronic tablet counting machine.
- Countbeat is compatible with both V-Shaped and U-Shaped channels.
- No Need to change existing vibrating plate.

REJECTION CONTROL
- Compact Air based rejection mechanism for dimensional & surface defects.
- Machine Stop on foreign product / practical detection.

DIAGNOSIS & STATISTIC
- Built-in Scope View control for I/O signal troubleshooting.
- Versatile camera and I/O troubleshooting tool for easy maintenance.
- Analysis-mode for analyzing last 600+ inspection result without interrupting production.
- Real-time production view during Analysis-mode.
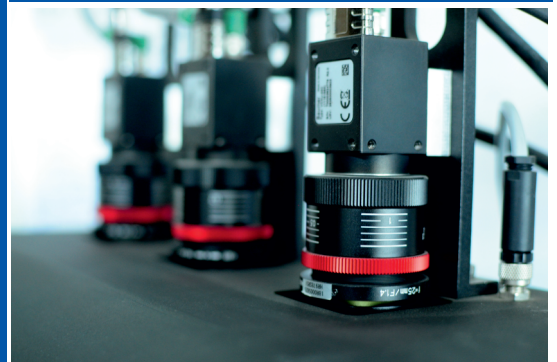- An interactive statistical report of every batch.

21CFR
- Customized user SOP and administrative procedure i.e. role customization

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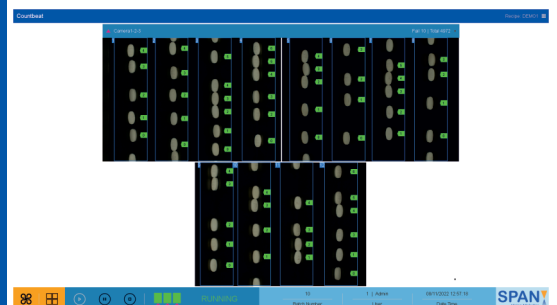
FULL IP65 HMI WITH TOUCH SCREEN

VIBRATION PROOF LENS

AIR BASED REJECTION WITH HOOD

SINGLE TEACHING OF ALL CAMERAS

HARDWARE, CAMERA & OS

IPC	CPU with IP65 Touch Screen HMI
Processor	High Performance Computer
OS	Windows 10
RAM	16 - 32GB
Camera	High resolution (sensor with large pixel size)
FOV of Camera	4 - 6 Channels per camera (Depending on the m/c type)
Lens	1" Lens with 25mm focal length
Lighting/Illumination	Polarized LED Lighting Unit
Touch screen size	22" wide screen
I/O	Ethernet based plug & play

DEFECT DETECTION ACCURACY IN TABLETS ON V-SHAPED VIBRATORY PLATE

	For tablet size of 10mm	For tablet size of 5mm
Area	> 20%	> 50%
Length	> 20%	> 50%
Width	> 20%	> 50%
Broken / chipped tablet	> 20%	> 50%
Difference in product color	> 10%	
Color Spot OR Chipped on Coated Tablet	> 1mm	
Foreign product / particle	Yes	

DEFECT DETECTION ACCURACY IN CAPSULES

Length (In Non-printed)	> 20%
Width (In Non-printed)	> 20%
Difference in product color	> 10%
Color spot (In Non-printed)	> 1mm
Cap/body missing	Yes
Cap on body (In Dual Color Capsule)	Yes
Foreign product / particle	Yes

SOFTWARE FEATURES

Multi camera support	Yes
Auto teaching tool	Yes
Auto teaching of all cameras using single button	Yes
Product dimension extraction tool during teaching	Yes (3D model camera)
Auto learning of acceptance tolerance	Possible for new or existing recipe
Smart Thresholding Tool	Yes
Oscilloscope view for signal error debugging	Yes
Alarms on user defined production limit	Yes
Audit trial report	Yes mention specifications are subject to change