

Image Inspection Systems

ViS-3



ibea Inspection Systems differ in comparison to those of others in that they are extremely customer- and product-oriented in their hard- and software design. ibea systems are deployed predominantly in the inspection of cans, ends, PT/TO caps, bottles or similar products within the metal packaging industry. Long-standing experiences of our mechanical engineers are at the center of our innovative hard- and software.

ibea uses only high quality camera, lens and illumination equipment – a key concept in developing sophisticated image inspection systems. The illumination elements are geared exactly towards the product needs by using durable LED's for the inspection of highly reflective products.

ibea components comply with the highest industry standards and secure system stability in harsh production environments for a long-lasting, mainte-

nance-free, around the clock performance. Through remote diagnostics we are capable of checking functions and settings at lightning speed. Our systems are modular in design and can be included into existing production lines within a short amount of time. Accessories, such as camera lift or zoom lens (auto-save) further enhance your flexibility if changeover in height and diameter is required.

ibea's ViS disposes of a great many software standards, in particular for the can-maker industry. Existing software versions are for TO-Caps, 2-piece and 3-piece cans, ends, easy peel ends, crown caps, closures, PET's, PT caps, rectangular cans and ends, etc.

The user software allows for working on different "jobs" simultaneously in order to concentrate on various product colours or designs, and ultimately to allow for the possibility of a quick product change-over. Job modifications are possible anytime, even while the system is in inspection mode. During inspection the operator has error statistics, course of inspection including error entries, pareto analysis, system status, and the last 200 images that show an error on display.

Up to 3 ejector signals are managed via internal RTS (Real Time System), which guarantees a controlled ejection even at varying conveyor belt speeds.

Our systems can be designed for high production speeds (3 m/sec) and part rates of more than 3,300 ppm!

ViS-3



ViS-3 single lane inspection system for flat cans (Crown UK)

Modular in design, future-proof and flexible

Electronic Rack

Amongst a variety of racks our product range includes a standard rack that is suitable for accommodation of the computer and PLC units. The Vario-Rack is suitable for accommodation of all units up to IP 54 (V2A).

The modern command panel comes with the ability to ergonomically adjust to differences in the operator's demands. All systems are equipped with TFT monitors. Every rack can be combined with our standard imagers.

On the back of the rack is the Power Down /PLC box which includes the 230 V power distribution box, switching relay for mass rejects and system status signals.

Imager

An imager is the combination of illumination(s), camera(s), and lens. ibea's concept is modular, i.e. variants for different applications can be built. Different ring illuminations are available as accessories (see back page).

The patented CFL (Color Flash Light) illumination with its very bright flashed LED's allows for longevity and constant high intensity, while offering clarification on varying product errors representations.

The imagers LP (version lightplate) and LD-big (version light dome) are additionally equipped with a beam splitter which eliminates that a

shadow of the lens appears on top of the object, and therefore optimizes the illustration of the defects. This is why small scratches can be displayed very brightly and high in contrast.

A multiplicity of applications is available and we would be pleased to inform you on all possible components to find the perfect illumination for your product.

Every imager includes connection possibilities for rotary encoder (calculation of speed for conveyor belt), trigger light barriers or trigger sensors, lift or zoom lens (for different product heights), one or more ring lights and one to three ejector stations.

Electronic Racks

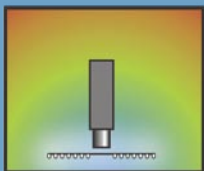
Command Panel



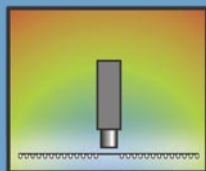
Vario Rack



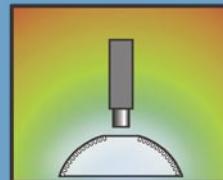
Imager



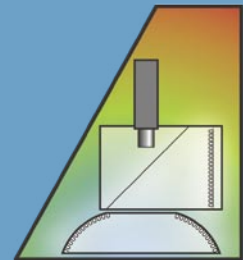
Imager CFL-LP
for flat round and square products such as ends, TO-caps, crowns, closures up to \varnothing 120 mm



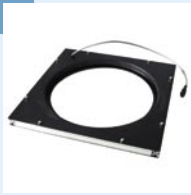
Imager CFL-LP oval
for various flat rectangular products up to 150 x 250 mm



Imager CFL-LD
for deep-drawn pieces up to \varnothing 120 mm and approx. 150 mm in height



Imager CFL-LD big
for round, deep-drawn or flat, beaded pieces up to \varnothing 200 mm and approx. 180 mm in height



2-level Corona
Two levels (Red/Blue) for round objects with max. diameter of 180 mm



Motorized Zoom-Lens
for automated selection of various diameters (0-200 mm)



3-level Corona
Three levels (Red/Green/Blue) for round objects with max. diameter of 120 mm



Motorized Lift
for automated height adjustment of the camera when working with changing product heights, lift range up to 200 mm



Rectangular Corona
with 1 level (red) for rectangular objects up to 100 x 200 mm



High-resolution Camera
for inspection of large objects



Air Condition
for Electronic Racks and/or cameras



PLC Power Down Combi Box
automated power down for PC version

ibea special:

Feel free to send us samples of your faulty products that need inspection. Please give us a short description of your conveying system, possibly including photographs. Please also include conveyor speed and part rate.

We will prepare a comprehensive offer specified to your needs, including needed accessories – all for an attractive price!

Technical specifications for all inspection systems and accessories:

Inputs:

- 240 VAC 50 – 70 Hz (16A) input voltage
- 24 VDC input for conveyor speed gauge
- 24 VDC input for trigger light barrier

Outputs:

- 3 x 24 VCC (1A) output per line for reject valves (1 x included)
- 2 alert outputs 24 VDC (100 mA)
- Serial interface RS 232
- Ethernet interface
- 2 more freely programmable system outputs 24 VDC (relays included)

ibea[®]
we keep an eye on your quality

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