

BETTER, FASTER, STRONGER:

THE NEW LENSES IN THE OPTO ENGINEERING® 360° OPTICS FAMILY

Many machine vision applications require a **complete view of an object's surface**. This request is becoming more and more common in a variety of markets, like the **beverage, pharmaceutical and automotive industries**: bottles and containers of different types, as well as many kinds of mechanical parts, require an inspection of the side surfaces to detect scratches and impurities or to read a barcode or, again, to ensure that some writings have been correctly printed. Opto Engineering® has long been famous for its line of 360° OPTICS where one image is enough to view the top and side of an object or the inside of a cavity. The **latest trends in Machine Vision**, which called for new developments in the 360° OPTICS product range, are **higher resolution, higher speed and the request for technological innovation**.

For many applications, in fact, **resolution** is crucial. Small defects can only be detected when covered by a number of pixels sufficient to give the right amount of contrast. **Speed** is also a key factor in many production lines, where it's not unusual for the inspection to take place at many thousand pieces per hour. Finally, it's important for integrators and machine builders to market their ability to keep up with the **new technologies**, hence **special products with improved or innovative features** need to be showcased. To answer these requests, we **released many new P/Ns** which add to our historic family of 360° OPTICS.

We extended the **TCCAGE SERIES**, a bi-telecentric system for multiple side imaging and measurement at 90° to cover **higher resolutions, up to 1.1"** on the 048 model and **4/3"** sensors on the 096 model, and new models of TCCAGE with **exceptionally**



Photography® supplied by Opto Engineering®

powerful, strobe-only illuminators, shooting hundreds of watts of illumination. Typical applications such as cable or small mechanical parts inspection will be much faster and accurate.

PCBP probes are used to inspect holed objects such as engine parts, containers and tubes by introducing a probe into the cavity. The new **PCBP023** lens is compatible with the standard **2/3", 5 MPx sensors**, allowing for higher accuracy. Also, **PCBPN013-WG** is our new optical solution for inspecting **smaller cavities, down to 8 mm**, combined with a **high-power illumination**, peaking at 45 W during strobe mode. Also, if you are using an external illumination source such as a backlight you can choose the new **PCBPN013** and reach a stunning **5.5 mm focusing diameter**.

PCHI optics are used to easily inspect holes, cavities and containers. These special wide-angle lenses for small parts are compatible with a wide range of object diameters and thicknesses.



Photography® supplied by Opto Engineering®

The new **PCHI023-MF** offers an improved focusing gear and is recommended when the operator needs to make frequent adjustments. **PCHI023-AF** represents a unique combination between our **PCHI023 lens and a built-in liquid lens module**: employing a separated controller, the machine will be able to communicate with the lens, setting any needed focus with extreme speed and repeatability.

Contact your local Opto Engineering Area Manager for more info: we can't wait to support you in your future machine vision projects! 