

MACHINE VISION

360° LENSES COLLECTION

Using fewer cameras to photograph each side of an object has become a common demand in the machine vision market, and this demand has become very common in industries such as beverages, medicines, and automobiles.

In traditional machine vision solutions, to capture information on the outer wall of an object, multiple cameras are required to capture one side of the object separately, and then synthesize the images. Using a 360° lens, only one camera can perfectly present the object in one image. Out-of-the-loop testing, multiple cameras and multiple lenses are not required, which effectively simplifies the layout of the vision system and reduces costs.

This lens is suitable for inspecting medicine bottles, plastic caps, bottlenecks, preforms, screws and mechanical parts cylinders, holes, bottles, threaded objects and mechanical parts, etc.



Subject to change without prior notice.

For more information, please contact our sales representatives.

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360° INNER SURFACE LENSES

PRODUCT FEATURES

1. High resolution and compact design
2. Can clearly detect hidden features and defects
3. Highlight the tiny defects of the detected object
4. The lens comes with an integrated LED light source
5. Able to detect tiny defects under a very wide viewing angle
6. Applicable to objects whose internal features can only enter the hole through the internal inspection lens



Model	Sensor	Image Size	WD	F/NO	Diameter	Height	Illumination	Mount
VT-360LEN-IN01	1/3"	Φ3.6	12.5-50	14	25	12.4	Embedded Illumination	C-Mount
					65	36.8		
					100	58.2		
VT-360LEN-IN02	2/3"	Φ6.6	2.7	8	5	5	External Illumination	C-Mount
			35		60	61.4		
			70		120	123		

360° OUTER SURFACE LENSES

PRODUCT FEATURES

1. High resolution and compact design
2. Used to achieve 360° side view imaging of small objects
3. The minimum measuring object is 4.5mm (outer surface)
4. Suitable for detecting components such as drug containers, bottlenecks, and other threaded objects



Part name	Sensor Size	Image Size	Diameter (mm)	Height (mm)	WD (mm)	F/NO	Mount
VT-360LEN-OUT01	1/3"	Φ3.6	7.5	4.6	46.2	16	C-Mount
			15	10.9	34.5	10	
			25	19.54	19	6	
VT-360LEN-OUT02	1/3"	Φ3.6	7.5	6.4	46.5	16	C-Mount
			15	12.8	34.7	10	
			30	25.6	9.7	6	
VT-360LEN-OUT03	1/1.8"	Φ5.32	7.5	5.3	45.4	16	C-Mount
			15	11.86	33.8	12	
			30	25	9	8	
VT-360LEN-OUT04	1/1.8"	Φ5.32	4.5	2.7	50	16	C-Mount
			15	11.86	33.8	12	
			30	25	9	8	
VT-360LEN-OUT05	2/3"	Φ6.6	7.5	4	48.2	16	C-Mount
			15	10.6	36.8	12	
			30	23.4	14	8	

360° MULTI-ANGLE LENSES

PRODUCT FEATURES

1. Only one camera is needed to detect the side signs of the object
2. Simultaneous imaging of the outer wall and top of the object
3. Ultra-high resolution, can detect small defects

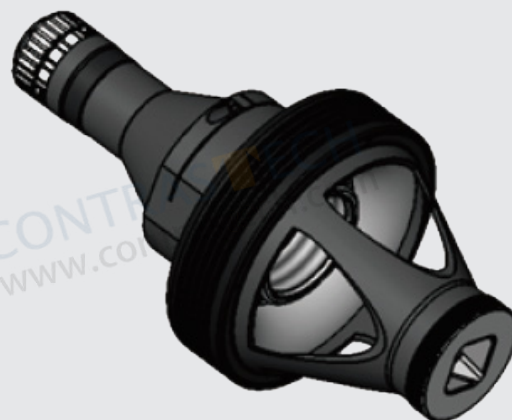


Model		VT-360LEN-0825-118	VT-360LEN-0825-230	VT-360LEN-0825-H1.1
Max Support CCD Size (Φmm)		2/3" (Optimal)	2/3"	1.1" (Optimal)
Optical Specifications	Wavelength Range	400~680 nm	450~650 nm	400~680 nm
	Working Distance	3~40 mm	20~40 mm	3~40 mm
	MTF30	150 lp/mm	150 lp/mm	126 lp/mm
	Best Aperture (F/#)	2.8~16	8~16	2.8~25
Mechanical Specifications	Max Diameter	140 mm	140 mm	140 mm
	Length	230.9 mm	229.3 mm	229.3 mm
	Mount	C	C	C
Electrical Specifications	Illuminator Voltage	24V	24V	24V
	Illuminator Power	18W	18W	18W
Max Object Diameter Detected From Side	Object Height 20mm	30mm	30mm	30mm
	Object Height 5mm	60mm	50mm	72mm
Max Object Diameter Detected From Side + Top	Object Height 10mm	30mm	30mm	30mm

3D MEASUREMENT LENSES

PRODUCT FEATURES

1. Side testing for 1-10mm small parts;
2. All visual sides have the same optical magnification;
3. Various three-dimensional co-construction of multi-faceted imaging at one time greatly improve detection efficiency and reduce equipment costs;
4. Compatible with industrial cameras on the market



Model		VT-BTLP-V1-118	VT-BTLP-V1-120	VT-BTLP-V1-230
Optical Specifications	Sensor Size	1/1.8"	1/2"	2/3"
	Wavelength Range	400~680 nm	400~600 nm	400~600 nm
	Working Distance	19-23 mm	1.5-5 mm	1.5-5 mm
	MTF30	>190 lp/mm	>200 lp/mm	>135 lp/mm
	Best Aperture	4.6	4.2	6.5
Mechanical Specifications	Diameter	123 mm	123 mm	123 mm
	Length	239.4 mm	238.3 mm	256 mm
	Mount	C	C	C
Electrical Specifications	Illuminator Voltage	24V	24V	24V
	Illuminator Power	18W	18W	18W
Max Object Inspection Height (mm)	M1.0	1.5	1.5	1.5
	M1.2	1.75	1.75	1.75
	M1.7	1.8	1.8	1.8
	M2.0	2.4	2.4	2.4
	M2.5	2.7	2.7	2.7
	MΦ3	4	4	4
	MΦ4	4.9	4.9	4.9
	MΦ5	5	5	5
	MΦ6	6	6	6
	MΦ8	5	5	5
	MΦ10	4.5	4.5	4.5

* Special note: The imaging device must be used with a telecentric lens on the object side, with its own lighting system, and the lens can be selected according to different inspection objects.

Inspection Case-360° Inner Surface Lenses

Motor Inspection



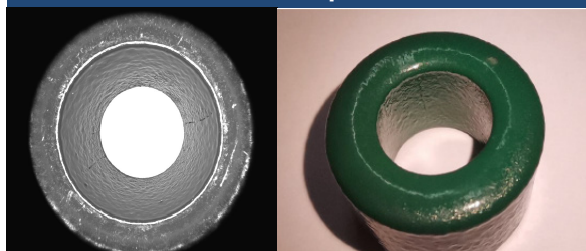
Thread Detection



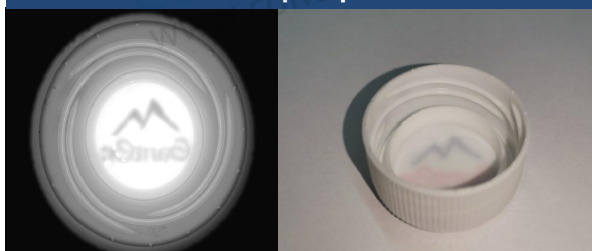
Rubber Inspection



Ceramic Inspection



Bottle Cap Inspection



Inspection Case-360° Outer Surface Lenses

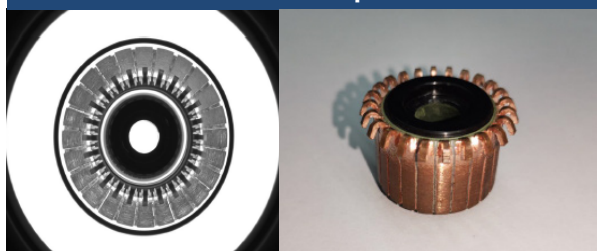
Outer Ring Character Detection



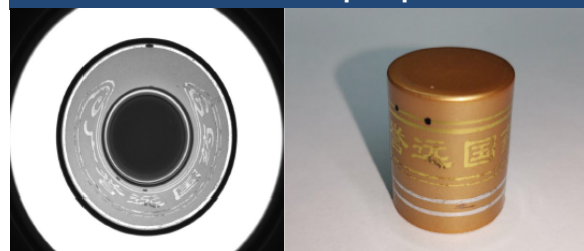
Medicine Bottle Inspection



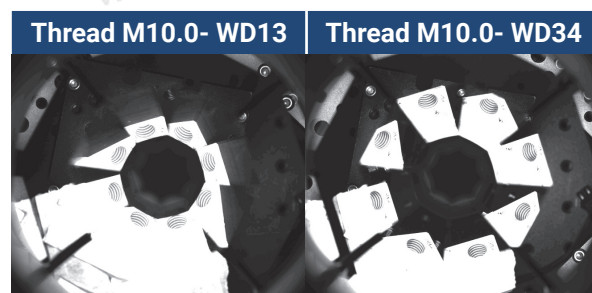
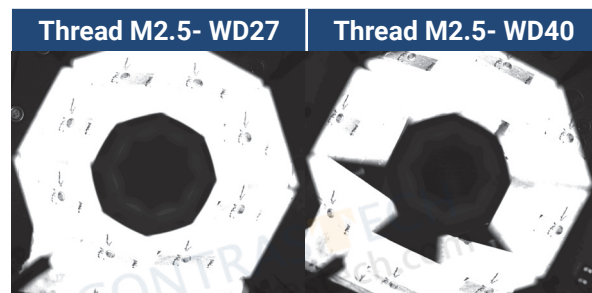
Coil External Inspection



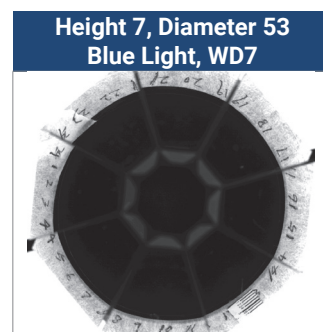
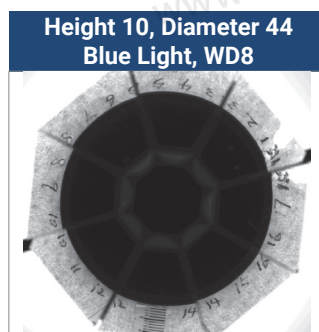
Medicine Bottle Cap Inspection



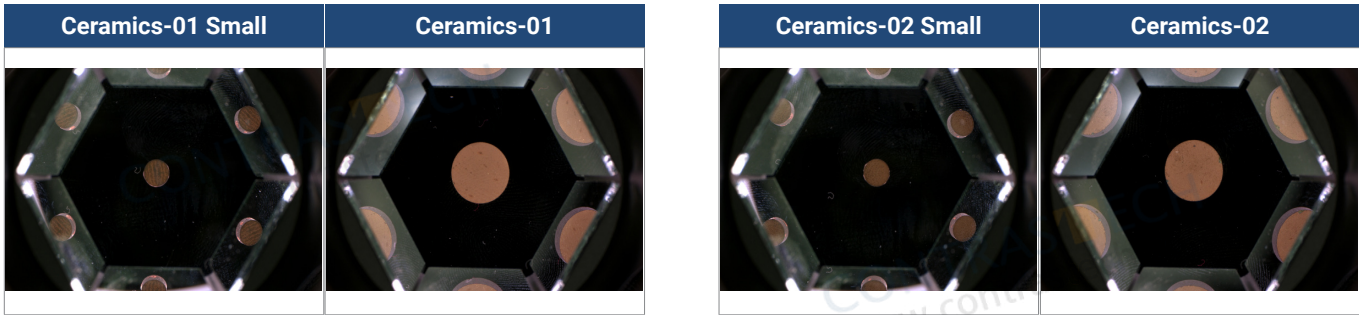
360° Multi-Angle Lenses Inspection Case: Top Imaging



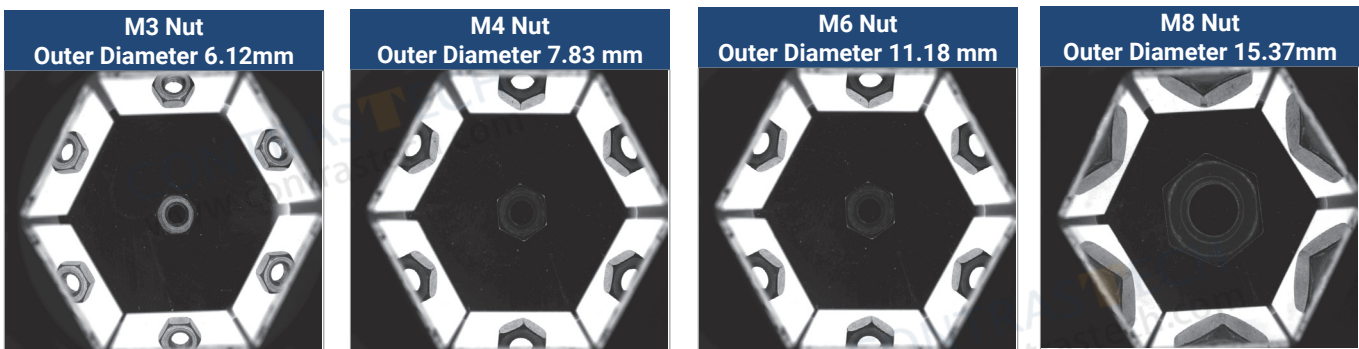
360° Multi-Angle Lenses Inspection Case: Side Imaging



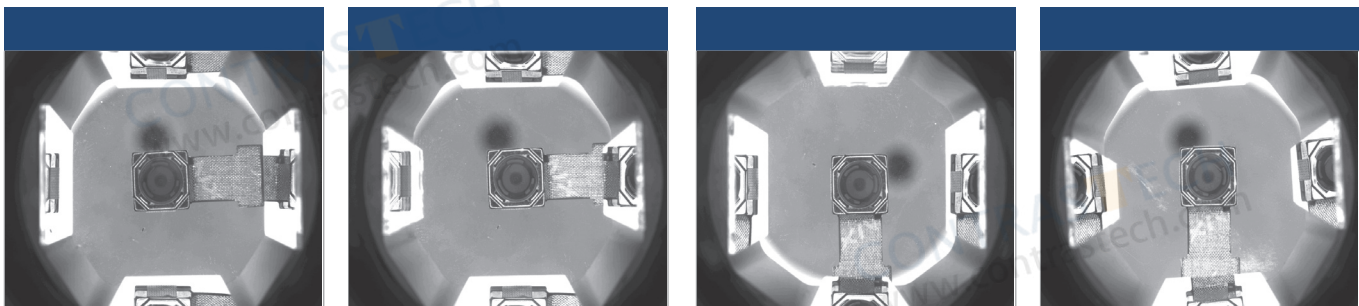
3D Measurement Lenses Inspection Case: Ceramics



3D Measurement Lenses Inspection Case: Nut Outer Wall



3D Measurement Lenses Inspection Case: Phone Camera



Vision And More Available

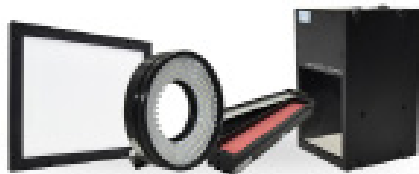
让工业更智能，让视觉更简单！



Industrial Camera



Industrial Lens



Lights



System Solution



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