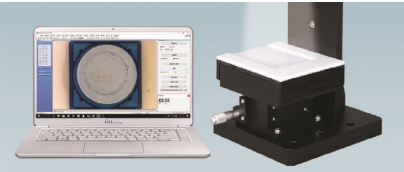


# One-Shot Solution™

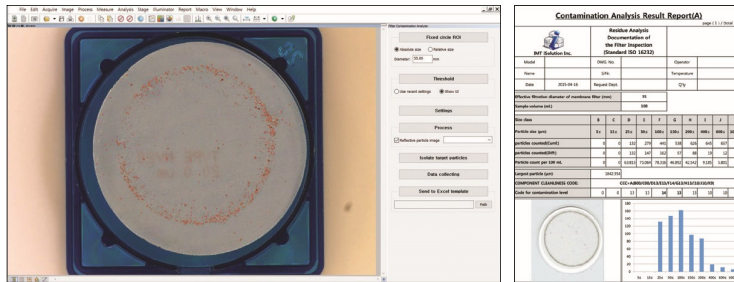
We have the patents in the principle, method, and design for all one-shot solution™ type A and type B.



## Automatic analysis system for filter contamination

Filter contamination analysis based on ISO 16232, ISO 4406-4407, NAS 1638, VDA 19-1:2015, STD 5091,52

System components: One-shot machine + Software + PC



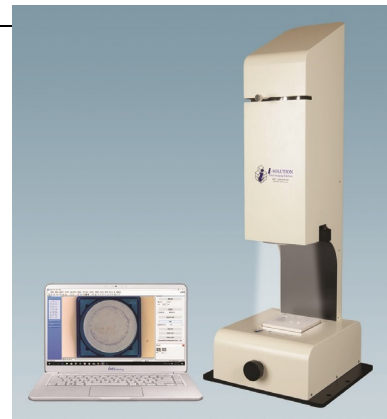
## Four general requirements by VDA 19-1:2015 (Verband der Automobilindustrie: Quality Management in the Automotive Industry)

- The light optical analysis system fulfils the respective requirements
- The cleanliness specification only considers particles same and larger than 50 um (pixel resolution: 5 um/pixel or 0.2 pixel/1 um)
- The analysis filter is well-prepared with particles being evenly distributed and particle occupancy being not too high
- The task is performed by specially-trained skilled staff

### Type A

Telecentric lens

- Optical magnification: 0.16x - WD: 240mm
- DOF: 6mm - Optical distortion: 0.01%
- FOV: 75mm x 50mm
- Camera: 20MP 1 inch sensor size USB3.0 interface
- Windows OS: Win10/ 8.1/ 7
- ISO 16232, ISO 4406-4407, NAS 1638, VDA 19-1:2015, STD 5091,52 (VDA 19 is a canceled standard)
- Auto and fixed method for light and thresholding
- Export to Excel template: Result can also be exported to customized Excel reports.
- Seeing results quickly: The largest particles are highlighted for better observation.
- Automatic detection of Reflective(metal), Particles, and Fibers
- Workflow for easy and fast analysis



### Type B

Telecentric lens

- Optical magnification: 0.26x - WD: 130mm
- DOF: 1.6mm - Optical distortion: 0.03%
- FOV: 50mm x 35mm
- Camera: 20MP 1 inch sensor size USB3.0 interface.
- Windows OS: Win10/ 8.1/ 7
- ISO 16232, ISO 4406-4407, NAS 1638, VDA 19-1:2015, STD 5091,52 (VDA 19 is a canceled standard)
- Auto and fixed method for light and thresholding
- Export to Excel template: Result can also be exported to customized Excel reports.
- Seeing results quickly: The largest particles are highlighted for better observation.
- Automatic detection of Reflective(metal), Particles, and Fibers
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