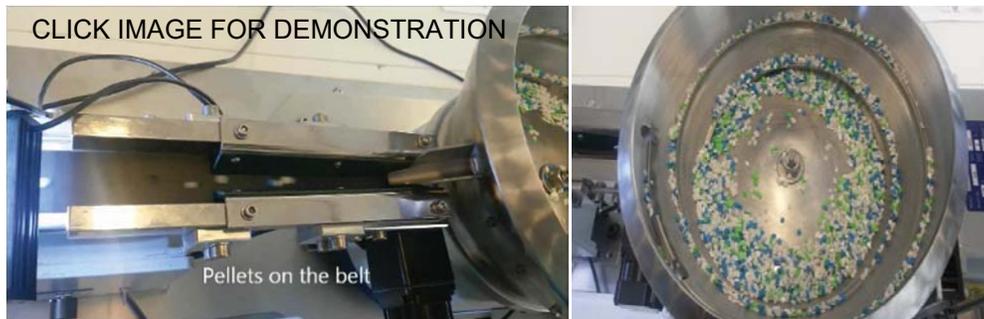Reference code: OCC-3D MORPHO 3D

CLICK IMAGE FOR DEMONSTRATION

Pellets on the belt

MORPHO 3D from OCCHIO Instruments:

This new device allows measuring particle size, morphology and color in real 3 dimensions. 2 cameras are used to take picture to analyse maximum diameter and thickness of particles.

CALLISTO 3D is a software to obtain particle picture in 3D

DRY analysis - Particle size 500 µm – 10000 µm

Technical specifications

Working conditions

	Description
Working temperature	Temperature 5°C – 45°C Humidity 35% - 80% non condensing
Power Supply	100 or 220 Vac 50-60Hz (auto-switching is not available please ask to Occhio to set power supply)

Computer (supplied by Occhio – minimum specifications)

	Description
Processor	Intel Core i7-2600 @3.4GHz, 4MB cache
Ram	4 GB @ 1600MHz
Hard Disk	500MB
Display	LCD, FullHD, 22"
Mouse, keyboard	USB (English)
Operating system	Windows 7 or 8

Optics and imaging device

	Description
Standard camera type	2 cameras Resolution 1.3 Mpixels
Light source	White diffused light LED Light

Sample analysis

Model	MORPHO 3D
Sample dispersion	Rotating disperser combined with linear conveyor belt
Sample particles size range	DRY / 500 µm – 10000 µm
Time measurement	1-3 minutes (sample et quantity dependent)
Sample analysis	Size distribution cumulate and proportional curve Number distribution or volume weighted distribution Sieves correlation (according with OCCHIO)
Standard Operating Procedure includes	Maximum number of particles Control on vibrating feeder (initial speed, acceleration, max) Particles per picture Light intensity calibration Background calibration Creation of a particle database Image storage Filtering procedure Automatic reporting generation

Software mains features

Model	Callisto Software
Size parameters (Iso 9276-6; 7; 8) All the size parameters are displayable or not according with the customer setting preference	ISO Area diameter ISO Inner diameter Mean diameter Perimeter diameter Crofton diameter Half Crofton diameter Width Length Ellipse Width Ellipse Length ISO Max Distance ISO Geodesic Length
Shape parameters (Iso 9276-6; 7; 8) All the shape parameters are displayable or not according with the customer setting preference	Occhio Bluntness Occhio Roughness Elongation ISO Aspect Ratio Ellipsoid Elongation Ellipsoid Roundness Ellipse Ratio ISO Eccentricity ISO Straightness ISO Roundness ISO Compactness ISO Extent ISO Solidity Convexity

	ISO Circularity Luminance mean Luminance var. Porosity
Advanced shape parameters	Developed in function of customer specifications Color analysis
Image format	Bitmap
Data storage	'.oph' binary Occhio files format contains: Full size distribution values Shape and size percentiles Outline and greyscale levels of each particle
Data comparisons	Open and compare more analysis on the same plots include 'trends graphic'
Plots and figure (By number or volume weighted values)	Acquisition info (short overview of the used SOP) Size distribution Size percentiles Shape percentiles Shape distribution Mean shape by size 2D scatter-plot (fully selectable particles map) 3D scatter-plot (include animation) Percentiles sample images Sample images (BMP exportable format) Id card for each particle (BMP exportable format)
Statistics tools	Morphological and size filtering procedure
Reporting and data export	Raw data export (text format) Table distribution export (text format) Table distribution and percentile export (Excel format) Automatic or custom reporting Full image export (bmp format) Single particle image export (bmp format) Figure and graph export(bmp format)
Microscope mode pane	Real time images acquisition without analyzing
External images analysis	Possibility to analyse images coming from others acquisition sources (bmp greyscale format)

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