Rheology Solutions is the sole Australian distributor of this product range and we welcome the opportunity of discussing your application requirements.

We hope the information you are seeking is contained within this file. If you have any questions, or require further information please contact us. We look forward to being of further service.

Regards from the Team at Rheology Solutions.
Granules Inspection PSSD

The PSSD is a modular inspection system for the rapid analysis of the size and shape of granules. The pellets which are to be inspected are moved by the vibrating channel and are measured individually in the free fall between the camera and the light source. This universal measurement principle enables the system to analyse up to 50 kg granules per hour, depending on the granule size and its bulk density.

The use of a high resolution CCD camera with automatic controllable lighting offers a continuous reproducibility of the measured results. This instrument can analyse granules and particles from 80 μm upwards, independent of their colour.

The optimal operation in a laboratory environment, as well as in an online measurement station is a paramount factor in the quality control. This instrument offers a huge variety of customised configurations to fit perfectly the customer’s needs and objectives. For example, when installed in a bypass of the production line, this system will allow for a fast response to production problems.

Characteristics and Performances

- Modular architecture
  Possibility of extension, easy adaptation and upgrade.
- Utilisation
  Windows interface and easy customisation.
- Optimal lighting techniques
  Use of a special lighting technique to avoid colour related troubles during the pellet analysis.
- Real-time image analysis
  Fast evaluation, analysis and representation of the measured results in different formats: table with size groups, time evolution, mosaic view, histogram, distribution.
- Table view
  Results displayed in table according to the shape, size, diameter, elongation, roundness, roughness, and/or convexity.
- Mosaic view
  Continuous display in real picture of the variations.
- Graphic of the characteristics
  Graphical display of the repartition by size, shape, etc.

The measured data are stored in a control protocol on the image processing computer to enable future analysis, and this data can be transferred to the control room. During the measurement process, the images and the stored data are displayed in real time on the monitor. The results can be shown in a table or in a graphic and can be printed as well.

Not only can this instrument perform an exacting analysis of the granules, it can also be used for recording, archiving and documentation purposes. Each variation of the pellet’s shape, size, diameter, elongation, roundness, roughness and/or convexity will be recorded in the measurement protocol on a multidimensional characteristics vector with an error map.

With this tailor-made and sophisticated software package, this instrument will perfectly fulfill all your needs!
Technical Data

• Camera
  CCD Line Scan Sensor 4096 Pixel (max. 80 MHz)

• Lighting
  High Frequency synchronised fluorescent lamp
  Power consumption: 32 W, White light spectrum

• Computer
  Industrial CPU Pentium, up-to-date technology

• Interface
  Ethernet 10/100 M Base-T, digital and analog E/A,
  USB, Modbus, Profibus, RS232 Connection BDE,
  SAP or SQL

• Remote control
  Extender max. 100 m

• Software
  Operating System Windows XP

• Size
  Dimension (l,w,h) 100 x 50 x 50 cm
  Weight approx. 60 kg

• Performance
  max. 50 kg/hour

• Time evolution
  Graphical display of the repartition of the characteristic according to the time evolution.

• Process synchronisation
  Interconnections between the inspection system and external instruments like BDE or SAP.

• Interface for external applications
  Alarm interface, digital balance...

• Open database
  The data from the protocol can be easily converted into all the common database format (MS Access, Excel ...).

Scope of application

• Opaque Granules
• Coloured Granules
• Non transparent Granules
• Transparent Granules

• Power Supply
  230V AC / 50 Hz
  115V AC / 60 Hz

• Temperature
  10 - 40°C

OCS - Optical Control Systems GmbH

Benefits

• Accurate and continuous automatic analysis
• Optimisation of the production process by providing detailed measured information
• 24 hour online production surveillance
• Trend analysis parallel to the production
• Logging of the production process