

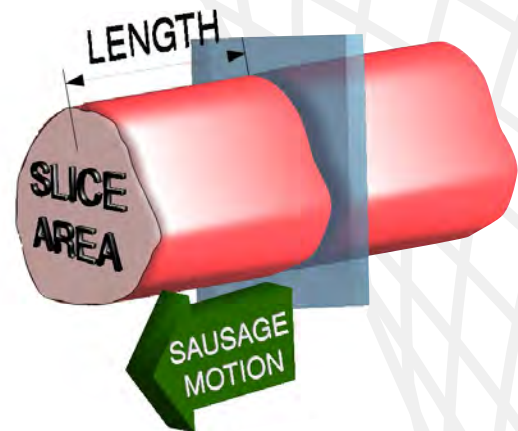
Fixed Weight/Fixed Volume Slicing Machine

AQSENSE has teamed up with a System Integrator (S.I.), for developing a new generation of fixed weight/fixed volume slicing machines. This approach provides accurate measurements resulting in higher yields when portioning irregular shaped objects such as sausages in the food industry. The measurement procedure has been wrapped as a new SAL3D Tool. The Area Computation Tool.

Key advantages in volume portioning:

The technical goal of the development was to determine the slice area in each acquisition for computing the cumulative volume, used for obtaining constant weight slices. Two sets of rigid camera-laser systems acquire the object bottom face, while other set acquires the top face.

This configuration captures the full perimeter at each trigger pulse. The **Metric calibration tool** makes possible the transformation of laser profiles to a global coordinate system. The **Area Computation Tool** determines the area of each profile with an accuracy of 1%. The software **Peak Detector** allows the SI to choose between 2D or 3D cameras depending on the required speed.



$$VOLUME = SLICE AREA \times LENGTH$$

Illustration 1:
Accurate volume measurement for irregular shaped objects

Strategic features:

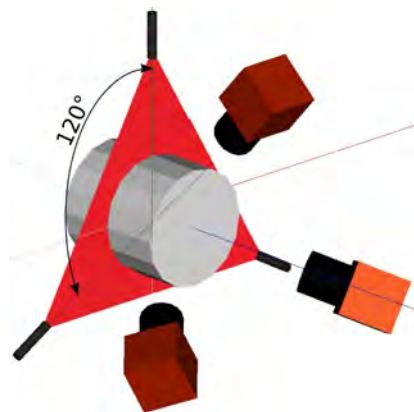


Illustration 2:

A multi-camera approach ensures accurate measurements because the total profile is gathered without occlusions.

The **Area Computation Tool** works with 3D CoPs and automatically adjusts position errors (tipping and tilts) in all axis providing metric measurements. Hence there is no need for highly accurate part positioning, resulting in a complete noncontact measuring configuration. This approach provides higher yields than current fixed volume/fixed weight slicing systems, with reduced cost in mechanical positioning and high working speed.

Similar applications:

- Fish portioning
- Cheese slicing
- Volume portioning of any continuous material