

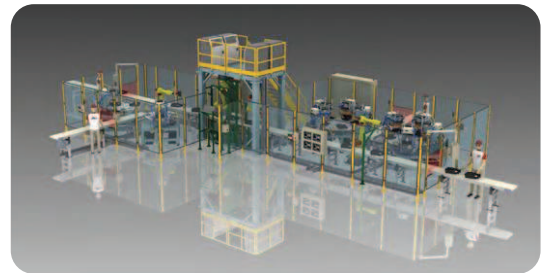


# DRAWING OFFICE (DRAFTING) SERVICES

*Providing confidence that your design achieves best practice standards.*

## SERVICES

- 3D spatial scanning
- Geometrical verification
- Draughting services



## BUSINESS CHALLENGE

Operations across industries need to have high levels of confidence that their facilities are accurately represented and will operate as intended. Often engineering drawings are not generated and approved inline with the relevant industry standards, or become outdated due to modifications or changes in standards or legislation. Effective designs meet industry standards, minimise lifetime costs, and ensure that the requirements for operational, safety and environmental performance are met. In order to achieve these feats, the following are typically required:

- 3D spatial scanning where scanning is performed to obtain information on geometries that are not measureable with hand-tools;
- Geometrical verification that validates the as-built geometry of components; and
- Draughting services for the design of technical drawings of structures, mechanical equipment or pipelines, encompassing:
  - New designs or drawings for existing items;
  - Drawings for inspection purposes;
  - Updates to an existing drawing database;
  - Improvements to an existing design; and
  - New designs all together.



## SOLUTION

Our Drawing Office reviews, updates or generates designs and shop detailing drawings (based on engineering inputs) that are defined by documented standards for structures, vessels, mechanical equipment and pipelines.

Our services include:

- 3D spatial scanning provides the rapid collection of 3D data; captures 'as-built' geometry quickly and safely; scans components on a micrometer scale; and scans large areas such as buildings and mine shafts. Output CAD models of scanned components/areas serve as input to other CAD packages.
- Geometrical verification scans components and compares models to the design drawings.
- CAD draughting services. These services ensure a seamless design process, enabling easy design review, clash detection and model review. It also functions as a marketing tool for clients, providing a visual representation of the end system or product long before construction/ manufacturing starts. With powerful tools that help reduce production time, CAD draughting enables companies to produce high quality, high accuracy drawings and models in the shortest possible time frame.

## KEY BENEFITS

Bureau Veritas provides confidence that customers' asset designs are compliant with industry standards and guidelines that draw on best-practice experience.

By confirming and providing designs that are based on industry best practice and applicable standards, the Drawing Office contributes to reducing design risk to as low as reasonably practicable (ALARP).

#### Benefits of 3D spatial scanning

- Fast
- High detail and accuracy
- Portable for use indoors and outdoors
- Virtual walk-through data of plants

#### Benefits of geometrical verification

- Compares the actual component with the design intent
- 3D holistic verification prevents accumulative measuring errors
- Reports on the wear patterns of components

#### Benefits of draughting services

- Accurate drawings and models
- Real-life visibility of models for preview purposes
- Design drawings
- Fabrication drawings
- Fast delivery times



## RELATED SERVICES

- Reverse engineering
- Mechanical design
- Structural design

## TOOLS AND TRAINING

- Metris MMD 100
- Quantum FARO Arm
- FARO Focus 3D X130

## INDUSTRIES

- Chemical and petrochemical
- Food and beverage
- Industrial
- Mining
- Natural gas and steam generation plants
- Oil and gas
- Power generation
- Processing/ manufacturing industry

## CONTACT

For details about this service, please contact Bureau Veritas:

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## FOR MORE INFORMATION

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- [www.bureauveritas.com](http://www.bureauveritas.com)