

Botanical Oil Extraction

Certified solutions for botanical oil extraction production lines



Overview

Botanical oil extraction is a multi-stage process that removes oils from solid plant matter by dissolving them in a solvent - the choice of solvent is dependent on the desired chemical composition of the oil. This process requires strict quality control and traceability of batch production when destined for human consumption. The extraction process takes place in a Class 1 Div 2 extraction room due to the use of combustible solvents, Butane and Propane.

Project Brief

The client uses a hydrocarbon extraction method to meet their need for a specific terpene content in their oil. Although this extraction method has many benefits due to the broad chemical spectrum of the product, it requires careful management of the combustible solution.

Challenges

The extraction room was designated as a Class 1 Div 2 area and required a certified process control cabinet and label printer for batch identification. The label printer needed to print labels without re-purging the enclosure or opening covers to access the printed labels.

Solution

The control panel protection was achieved using an Expo Enclosure and Purge system. This allowed the client to place the control panel at the point of use, improving their workflow. After installation of the customers control equipment, the overall system was inspected and certified by an Expo consultant.

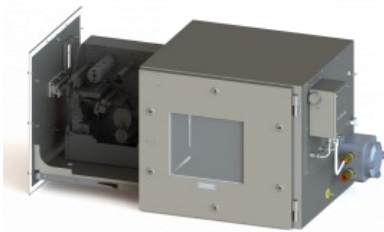
The label printer solution allowed the use of a standard Zebra printer with an innovative sealing method to allow the label to pass through the enclosure wall without losing pressure or consuming large quantities of compressed air.

Expo Products and Services

Hazardous Area Label Printers

Gas & Dust certified, packaged solutions for Zebra ZT 411 (4") and ZT 421 (6") industrial label printers.

Features

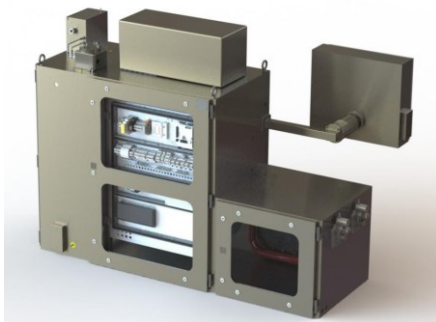


- Hazardous area solution for industry standard label printing – systems for 4" and 6" label sizes available
- ATEX / IECEx Zone 1/21 and 2/22, North American Class I & II Div. 1 & 2
- Power and signal safety interlocked for full code compliance
- 316L stainless steel enclosure for industrial & ultra-clean environments

Printers for bar code and batch number labels are found in many manufacturing facilities. If the printer is to be located in a hazardous area, for instance within a pharmaceutical production line, then a certified solution is required to ensure safe operation.

[Click here](#) for more information.

Custom Enclosure Service



With Expo's fully custom process, a dedicated engineer will work with you to develop exactly what you need and agree on a detailed budget and project timeline with milestones. As this is a highly flexible service, we can adapt the plan if your project requirements change.

[Click here](#) for more information.

Certification consultancy

Our Certification Engineer works with the customer through a standard, well-proven process to make sure the design is compliant with the Expo's Schedule of Limitations (SoL), ensuring successful project completion. The SoL defines the scope of what can be certified under Expo's populated enclosure certificate and is broad enough to cover most applications.

[Click here](#) for more information.