

FAT & OIL PROCESSING

4B AUTOMATION | 4B SYSTEMS

Inspired. Passionate.

Food & Beverage Specialists in Process Automation, Equipment & Solutions

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Fat & Oil Processing Solutions

At 4B Automation & 4B Systems, we design and integrate fat and oil processing systems that support the production and refinement of edible oils and bio-based products.

With a focus on process design, automation, hygiene, and energy efficiency, our solutions enable producers to optimise extraction and purification; ensuring consistent quality, higher yield, and reduced operational costs.

Our tailored systems include:

- **Olive Oil Processing:** Crushing, malaxing, separation, and clarification systems engineered to maximise purity, aroma, and oil yield.
- **Palm Oil Processing:** Sterilisation, clarification, and refining systems that improve yield and product consistency.
- **Seed Oil Processing:** Extraction, filtration, degumming, and refining equipment for sunflower, canola, soybean, and other oilseeds.
- **Avocado Oil Processing:** Cold-pressing, centrifugation, and filtration systems that preserve natural nutrients, flavour, and quality.

From process design and automation integration to commissioning and local service, 4B Automation & 4B Systems delivers turnkey, hygienic, and scalable oil processing systems built for performance, sustainability, and long-term reliability.



Olive Oil Processing



Avocado Oil Processing



Palm Oil Processing



Seed Oil Processing

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4B Systems specialises in the design and manufacture of industrial processing equipment for the food and beverage industry, while also supplying world-class Alfa Laval systems and Hommak homogenisers and high shear mixers. Known for our commitment to quality, we deliver reliable, feature-rich solutions that offer long-term value to our clients.

Related systems/Products:

Decanters:

- **High-efficiency decanters designed to deliver reliable separation, improved oil recovery, and consistent performance across olive, palm, seed, and avocado oil production.**



Thermal Conditioning:

- **Optimise oil extraction with controlled, energy-efficient thermal conditioning systems engineered to improve yield, preserve natural quality, and enhance overall process efficiency across fat and oil processing applications.**





Reception, Washing & Sorting Systems:

- **Ensure olives and avocados enter your extraction process clean, sorted, and ready for efficient oil recovery with robust reception, washing, and sorting systems.**



Centrifugal Separators:

- **Deliver reliable oil clarification, improved stability, and consistent quality with high-performance centrifugal separators engineered for continuous fat and oil processing applications.**



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Related systems/Products:

Bag-in-box Fillers:

- **Available in aseptic or non-aseptic fillers for 2-20 litre bag in box, 200 litre drum filling or 1000 litre flexitainer filling.**
- **Available in single or dual filling head versions.**



Malaxers:

- **Efficient paste conditioning for improved oil yield, quality, and process consistency; high-performance malaxers engineered for continuous fat and oil extraction.**





Crushers / Disc Crushers:

- **Prepare your avocado paste for maximum yield and quality; reliable, energy-efficient crushing systems designed for smooth extraction performance.**



Clean in Place Systems:

- **Our system incorporates software that continuously analyses system data and adjusts cleaning parameters in real-time, optimising cleaning performance and reducing chemical and water usage.**



MX Mixer:

- **Efficient mixing for degumming, acid conditioning, and neutralisation; designed for reliable performance in oil refining operations.**

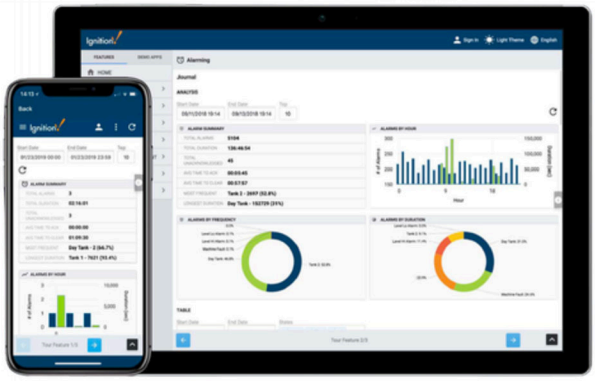


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Our Automation Solutions

For all your plant automation and processing needs



- **Ignition SCADA**
- **Data Collection (Historian)**
- **Siemens System Integrators**
- **Electrical Installation**
- **Remote Support Solutions**
- **Panel Building**

4B Automation specialises in industrial automation solutions, utilising Siemens PLCs, HMIs, Ignition SCADA platform, Canary historian and IFM as our standard suite.

We are experienced in a diverse range of PLCs, HMIs, and SCADA platforms and often deploy systems utilising Wonderware InTouch and Wonderware System Platform.

Our comprehensive inventory includes Siemens PLCs, HMIs, and low voltage switchgear such as isolators, circuit breakers, and direct-on-line motor starters.

- **Siemens**
- **Danfoss**
- **Anderson Negele**
- **IFM**
- **Anton Paar**
- **Endress and Hauser**
- **Krohne**
- **Festo**
- **SMC**
- **Helukabel**

In the development of our solutions, user experience is of paramount consideration. Our systems excel in creating meaningful connections.

Operators, technicians, and management derive value from the comprehensive feedback, guidance, and analytical insights our systems provide.

The scalable design of our control system allows for flexibility.





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Automation Services

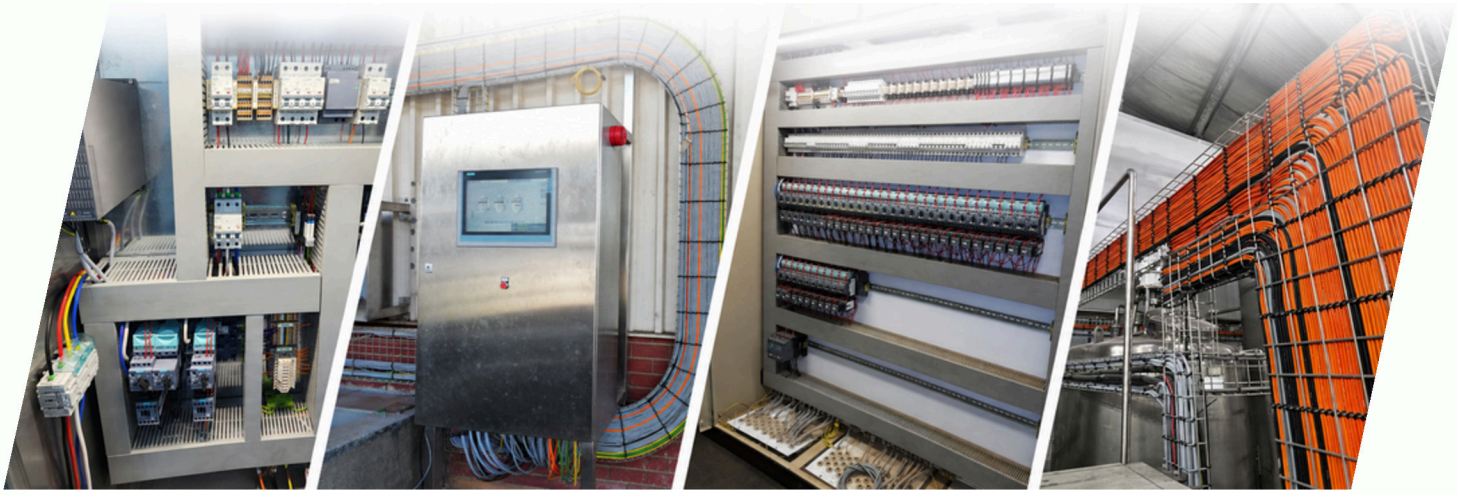
As part of our comprehensive automation solution, we offer the following services:

- **Control system design**
- **Control philosophy**
- **Industrial communication network design**
- **Software standards development**
- **Software development**
- **Implementation**
- **Electrical design**
- **Electrical installation**
- **Instrumentation**
- **Training**
- **Support**

Electrical Installation

An overview of select completed Electrical Installations:

- **Electrical Cable Installation**
- **Instrumentation Cable Installation**
- **Cable Tray Installation**
- **MCC Design and Building**
- **Panel Building**
- **Panel Refurbishment**
- **Panel Design**





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Mechanical Process Installations

4B Systems offers high quality mechanical processing installations, this includes:

- **Process Designs**
- **P&ID's**
- **Solidworks Drawings**
- **Food Grade Welding**
- **Processing System Relocation**
- **Flow Panel Design and Fabrication**



Hommak Homogenisers

4B Systems has its own range of the renowned Hommak homogenisers, high pressure pumps and high shear mixers.

These systems are supported and integrated by 4B and we stock components for our install base. Short lead times are made possible through Hommak, who manufactures parts under one roof. Spare parts are guaranteed to be delivered within two days of request.



- **20l/h up to 20 000l/h**
- **Both aseptic and non-aseptic machines are available.**
- **Delivery time: 6-8 weeks from factory, 1 week delivery option is available.**

Hommak High Shear Mixer

Furthermore 4B Systems offers the Hommak High Shear Mixer:

- **Liquid Capacity (L/H) : 750 - 18000**
- **Powder Capacity (Kg): 150 - 2.500**



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Alfa Laval

4B your Local Alfa Laval Equipment and Integration Specialist

Since 2014, 4B Automation & 4B Systems has been an authorised Alfa Laval distributor, delivering integrated processing solutions using world-class valves, pumps, and heat exchangers; supported by local expertise and ongoing service.Clients benefit from top-tier equipment, full plant integration, and ongoing support.

We also offer an array of Alfa Laval processing equipment and plants, expanding our portfolio to meet diverse industry needs:

ALDOX:

- **Deaerated and carbonated high quality water for breweries and soft drink manufacturers.**



Heat Exchangers:

- **Hygienic, efficient, and energy-optimised heat-exchanger systems.**



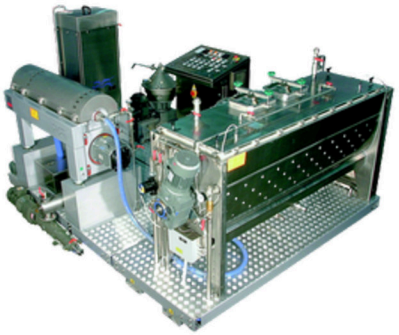
Lowal De-alcoholiser:

- **Dealcoholize beer and fermented low-alcohol drink types in the same plant.**
- **From 300 to 1,000 hl/day of dealcoholized beer with <0.5% alcohol by volume.**



Alfa Oliver:

- **A modular, continuous olive oil extraction system integrating crushing, malaxing, and separation for high yield, consistent quality, and reliable performance.**



Dealcoholisation Module:

- **Removes alcohol in a single pass.**
- **Up to 100 hl/h for 0.0% and <0.5% beers.**



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One Partner. Every Layer Of Your Plant.