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CE 650 Biodiesel plant

Order code: **5201.08365000**

Information about product price on demand

Parameters

Quantitative unit	ks

GUNT CE 650

Biodiesel Plant is a fully integrated system designed for the chemical transesterification of vegetable oils into biodiesel. This plant features a two-stage, continuous process with two heated stirred tank reactors to efficiently carry out the transesterification. It is equipped with phase separators for separating the biodiesel and by-products, as well as a methanol recovery system for reducing the amount of methanol required during the process.

The biodiesel washing system further purifies the biodiesel by removing impurities. The plant's design allows for the variation of process parameters to explore dependencies in biodiesel production. Control is facilitated by an Eaton XV303 PLC, operated via a user-friendly touch panel. Data acquisition is supported through a PLC, allowing for internal memory storage and remote access via WLAN/LAN. This enables integration with the customer's network or direct LAN connection without the need for a network.

Technical Data & Specifications:

- PLC: Eaton XV303

Tanks:

- Stirred tank reactors: 2x 5 L
- Storage tank (vegetable oil): 110 L
- Storage tank (chemicals): 45 L
- Product tank: 110 L
- By-product tank: 45 L
- Methanol tank: 6 L
- Phase separator/biodiesel washer: 3x 15 L

Peristaltic Pumps:

- Max. flow rate: 25 L/h

Measuring Ranges:

- Temperature: 6x 0–100°C
- Pressure: 1x 0–6 bar (abs.)
- Flow rate: 11x 0–30 L/h
- Level:
    - 3x 1–22 cm
    - 2x 1–29 cm

Operating Conditions:

- 230V, 50Hz, 1 phase
- 230V, 60Hz, 1 phase
- 120V, 60Hz, 1 phase (UL/CSA optional)

Included Items:

- Two heated stirred tank reactors for chemical transesterification
- Two phase separators for separating products and by-products
- Methanol recovery system (distillation) for methanol reduction
- Biodiesel washing system (absorption)
- Peristaltic pumps for product transfer
- Eaton XV303 PLC for plant control
- Touch panel for operation
- Data acquisition via PLC with internal memory and WLAN/LAN access
- Software for monitoring and control

Dimensions & Weight:

- Dimensions (L x W x H):
    - 1900 x 790 x 1700 mm
    - 2200 x 790 x 1700 mm
- Weight: Approx. 560 kg

Required for Operation:

- Vegetable oil
- Potassium hydroxide
- Methanol
- Nitrogen: 0.06 kg/h, minimum 2 bar
- Water connection + drain: 400 L/h, minimum 2 bar
- Exhaust air + ventilation: 245 m^3/h