

Ethylene Decomposer

a 100% Van Amerongen product



- Isolated catalyst bed and heat exchanger in one
- Increase of air temperature to CA room $<5^{\circ}\text{C}$
- Ethylene content <5 ppb by 250°C working temperature

VA makes the difference



4 pneumatic valves incl. open/close indicator



Two way temperature control by Hardware and software



Temperature control heating elements

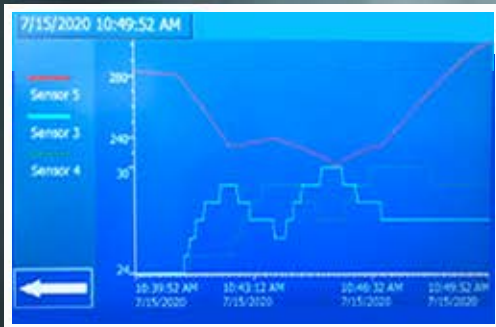


- Buffer tank to ensure pressure pneumatic valves
- Frequency controlled ventilator
- Safety power plugs heating elements

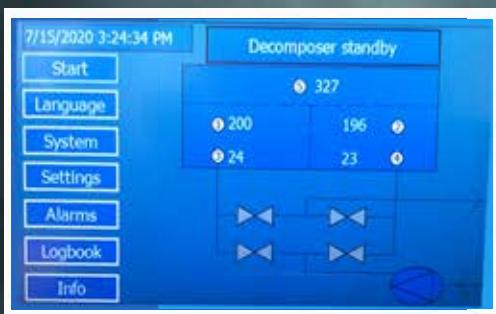


Insulated Catalyst bed and heat exchanger in one

VA makes the difference

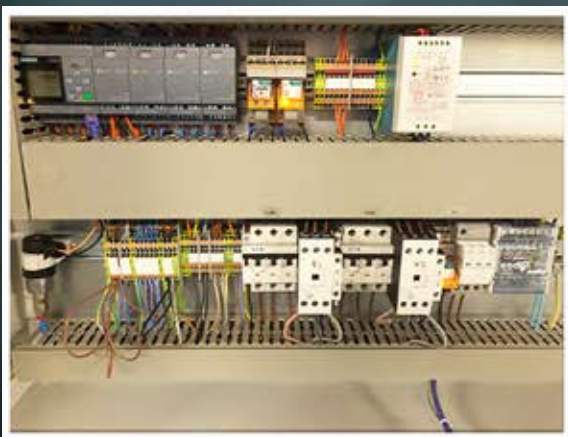


Graph temperature registration



Standby mode

Energy saving by cooling down prevention



Controlled by Siemens PLC

SIEMENS SIMATIC HMI



Working principle

Overview temperature of the decomposer at 5 places

Ethylene decomposers that Van Amerongen have been producing for many years are based on the technology of reverse reactors for catalytic oxidation. Such reactors make it possible to obtain a small difference in temperatures measured at the inlet and outlet of the stream of gas purified from ethylene. The level of the temperature difference can be controlled by the time of the reverse of the flowing air which is being cleaned of ethylene. The heat used to oxidize ethylene is accumulated in the reactor, and the heat exchange takes place on a ceramic high-efficiency exchanger.

This minimizes the energy needed to fully oxidize ethylene, according to the reaction $C_2H_4 + 3 O_2 \rightarrow 2 CO_2 + 2 H_2O$. The catalyst specially dedicated to this process allows many years of operation of the ethylene converter, because the actual catalyst load is minimal. In addition, the converter is equipped with a specially developed control that enables virtually maintenance-free, continuous operation of the device.

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Type	Ton kiwi fruit under CA conditions	Output Nm ³ h ⁻¹	Voltage (VAC)	Current (Amps)	Power Ventilators (kW)	Power heating elements (kW)	T Catalyst during operation (°C)	T Return (°C)	Dimensions W x D x H (cm)	Weight (Kg)	Diameter PVC connection (mm)
ES0200	200 - 300	200	380 - 400	10	1,1	4	250 - 300	< 5	175 x 150 x 190	1000	125
ES0400	400 - 500	400	380 - 400	12	1,1	5	250 - 300	< 5	175 x 150 x 190	1200	125
ES0600	600 - 900	600	380 - 400	17	5,5	6	250 - 300	< 5	190 x 190 x 180	2000	160
ES1200	1200 - 1800	1200	380 - 400	25	5,5	12	250 - 300	< 5	235 x 245 x 180	2500	160
ES1800	1800 - 2700	1800	380 - 400	40	7,5	18	250 - 300	< 5	301 x 261 x 183	3000	160