

# DECARBOXYLATION OVEN – PF460

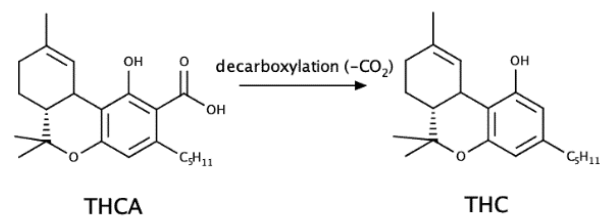


## APPLICATION

Decarboxylation is a chemical process achieved via the heating of a substance in order to remove a carboxyl group (an active part of a molecule containing carbon, oxygen, and hydrogen), changing the properties of the substance. This process is particularly important in the preparation of medicinal cannabis for the pharmaceutical industry.

Cannabis naturally contains tetrahydrocannabinolic acid (THCA) which can be converted into the psychoactive tetrahydrocannabinol molecule (THC) via decarboxylation. Along with cannabidiol (CBD), THC is a vital component in some cannabis-based medicines.

The legalisation of cannabis for both recreational and medicinal purposes in parts of North America has driven demand for such products, and in turn, the equipment required to produce them.



## SOLUTION

The PF460 has been specially designed for the drying and decarboxylation of cannabis for the pharmaceutical industry and is capable of operating up to 200°C. This range allows the customer to switch between optimum temperatures for both drying and decarboxylation processes.

The oven features two large air recirculation fans that help to both maintain temperature uniformity and extract moisture from inside the chamber; manual air inlet and outlet dampers to enable the customer to adjust the amount as air flow as required. Although fitted with four gridded shelves, there is provision for up to 13 shelves to be fitted, enabling the customer to maximise throughput and take full advantage of the ovens 460 litre capacity.

In the model pictured, control instruments are housed to the right-hand side of the chamber, including the optional CC-T1 touch screen controller, with built-in over-temperature protection and data logging functionality. The humidity indicator option is also featured to allow the customer to monitor conditions within the oven chamber, and an ethernet port is fitted at the rear of the control box for remote monitoring.

The PF460 is available with a range of options, including an exhaust fan for moisture removal, a nitrogen gas system, and a range of alternative temperature controllers. Designed specifically for the USA market, these ovens are also CSA/UL compliant.



## STANDARD FEATURES

- | 200°C maximum operating temperatures
- | 460 litre chamber volumes
- | Equipped with the 3016 digital PID temperature controller
- | 3300 over-temperature protection with independent thermocouple and safety contactor
- | Fan convection for rapid heating and recovery, and excellent uniformity
- | Chemically resistant stainless steel liner
- | Four nickel-chrome plated wire shelves
- | Lever latch door and airtight silicone seal
- | 13 available shelf positions, spaced 100mm apart
- | Air inlet and exhaust outlet easily accessible adjustable dampers
- | Sealed seams and semi gas tight for drying applications
- | Adjustable feet
- | Electrical Isolator
- | Ethernet Communications
- | Compliant with CSA / UL accreditation, and safety standards BS EN UL IEC 61010-1-010 :2010+A1:2019, and BS EN UL IEC 61010-2-010:2020

## OPTIONS (SPECIFY THESE AT TIME OF ORDER)

- | A range of sophisticated digital controllers, multi-segment programmers and data loggers is available.
- | A relative humidity sensor connected to a digital instrument displaying % RH
- | Access port for independent thermocouple
- | Gas System for processing in a semi-inert atmosphere
- | Variable speed fan control
- | Stoving & curing for extraction of small volumes of volatile solvents (not compatible with viewing window option)
- | Viewing window (not compatible with stoving & curing option)
- | Interior light (not compatible with stoving & curing option)
- | Door interlock activated by temperature alarm relay (3016, CC-T1, 3008 or Nanodac) or program segment output (CC-T1, 3008 or Nanodac)
- | Lockable door
- | Door switch to isolate elements and fans

## FEATURES

Nickel-chrome plated wire shelves



Lever latch door



Adjustable Air Damper



Standard 3016 Programmer



Optional CC-T1 Touchscreen Programmer



## TECHNICAL DETAILS (MODELS)

	PF460
Max temp (°C)	200
Min temp (°C)	Ambient +30
Temp stability (°C)	Better than ±0.5
Temp uniformity (°C)	±5.0
<b>Dimensions:</b>	
Internal H x W x D (mm)	1355 x 670 x 525
<b>Dimensions:</b>	
External H x W x D (mm)	1711 x 1088 x 1143
Shelves fitted / accepted	4 / 13
Shelf loading each / total (kg)	10 / 50
Volume (litres)	460
Max power (kW)	6.0 @ 208V / 7.5 @ 240V
Weight (kg) (approx.)	315

**Please note:**

- Uniformity is measured in an empty chamber with vents closed, after a stabilisation period
- Shelf loadings are based on evenly distributed weight
- The uniform volume is smaller than the total chamber volume
- Maximum power based on a 240V supply
- Stoving and curing option may require increased maximum power