

High-Efficiency Multi-Phase HEMP Dryers - 2019

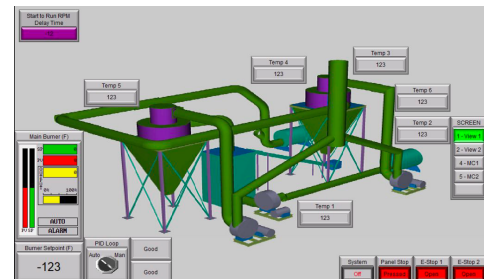
Insurance for your Harvest



IEC Thermo **High Efficiency Multi-Phase HEMP** dryers combine established drying and processing techniques into a drying process that keeps cannabinoid molecules intact and undamaged, providing a timely and cost-effective means of stabilizing your harvest before mold, mildew or composting can occur, allowing for future processing at a pace you determine.

Advanced PLC Control Set and Motor Control Center Standard Instrumentation for 2019

- Data Logging and Remote Access
- Single Button Startup / Shutdown
- Large Animated Touch-screen Interface
- PLC and MCC delivered pre-wired
- Remote Camera Monitoring / Support



Dryer Specs

- Dryer capacities – 3000 lbs. to 15,000 lbs. per-hour (80% wet in to 10% or less moisture)
- Moisture levels reduced from over 80% to under 10%
- Metered feed-in conveyor/hopper, feed-out auger, and connecting conveyors are standard
- Order-to-delivery time is 8 to 16 weeks varying with size ordered and delivery date

Continuous Flow

- Continuous Feed, 2-3-minute drying time
- Protection of your cultivars with low temperature operations
 - Biomass reaching no more than 130-140 degrees F
- Fully Instrumented and minimum of moving parts - easily operated and maintained

Start-up/Training Included, Professional Installation Available

- System start-up and initial personnel training included
- IEC offers domestic and international installation options

New for 2019 – See IEC Thermo's Alcohol Recovery Technology dryer, A.R.T. dryer

- For post-alcohol/ethanol-extracted biomass. 100% recovery of alcohol, 100% dry biomass
- Capacities from 1,000 pounds per hour (wet feed-in)
- Save thousands of dollars per day in recovered ethanol/alcohol!!!

Email: Brett Schnepf - bretts@iecompanies.com or call: 425-829-2080
Also visit: www.iec-thermo.com

High Efficiency Hemp Dryer – H.E.M.P. Dryer Capacities, Specifications and Prices

IEC Thermo provides H.E.M.P. Dryers in 3 sizes to accommodate those farmers and processors with a wide range of capacities. To determine what capacity dryer to purchase, please consider the following:

- If **drying directly out of the field**, take the harvest's **total** estimated biomass weight, divided by the number of days you plan to harvest, divided by the number of hours you plan to harvest per day. This will provide your capacity requirements for any given harvest period.
 - Example – 2019 Harvest:
 - 50 acres, whole plant harvest of 8,000 lbs. an acre @ 70% moisture = 400,000 lbs. of biomass
 - 10 acres / day harvested using 2 – 10 hours shifts = 20 hours a day
 - Math: 400,000 lbs. / 10 days = 40,000 lbs./day → 40,000 lbs. / 20 hours/day = **2,000 lbs./hr. capacity**
 - Referencing the table below you can go with a HEMP 3000S and have extra capacity of 1,000 lbs./hr. for 2020
- If **baling directly from the field**, you will want to look at matching your drying and extraction capacities.
- Feed-in and output conveyor and auger are now included.
 - Clean, discrete, cutting of the feed at harvest is your #1 priority!!!
 - Ideal feed size, 1" → 0.25", example is pictured to the right →



H.E.M.P. Dryer Model	CAPACITY - Wet Hemp Feed-in LBS/Hr. by Moisture Level			Dryer Only Price	Delivery + Installation Estimate*	Turnkey \$\$\$ Estimate Total*	Minimum Footprint	Electrical	Gas LP or NG	LP	NG	Total Weight
	70% -> 10%	60% -> 10%	50% -> 10%					HP	BTU/Hr	Gallons/Hr	Ft ³ /Hr	LBS
HEMP 3000S	3,000	3,700	4,250	\$450,000	\$150,000	\$600,000	30'x45'x25'***	220	8,000,000	88	8,000	36,000
HEMP 6000L	6,000	7,400	8,500	\$825,000	\$175,000	\$1,000,000	35'x55'x35'***	340	16,000,000	176	16,000	65,000
HEMP 15000XL	15,000	18,500	21,250	\$1,800,000	\$300,000	\$2,100,000	45'x65'x43'***	800	40,000,000	440	40,000	130,000

* Installation estimates include base estimates for electrical, gas and duct work, which will be sourced locally by customers - final amount will vary based on site readiness and local rates

** The last number is for height, the tallest components are the cyclones, yes, they should be installed indoors if at all possible.



Alcohol Recovery Technology Dryers - 2019

Make your last processing step safe, profitable and 100%

IEC Thermo's **ART Dryer** continuous flow process allows for safe and complete management of your post-alcohol-extracted biomass by safely removing the remaining alcohol, Ethanol, heptane, and/or Isopropyl.

Why is this important?

The ethanol extraction process, even with the best centrifuges and screw presses, will leave your hemp biomass containing 30-35% ethanol. This ethanol latent biomass is both dangerous and expensive.

Aside from the obvious flammable hazard ... for every 1000 pounds of expended biomass there is 300-350 pounds, say 40 gallons, of ethanol. At \$25/gallon this is \$1,000 in lost profit for every 1,000 pounds of expended biomass your extraction facility produces. That is \$40,000/week of lost profit (for a 40-hour week).

ART dryer output

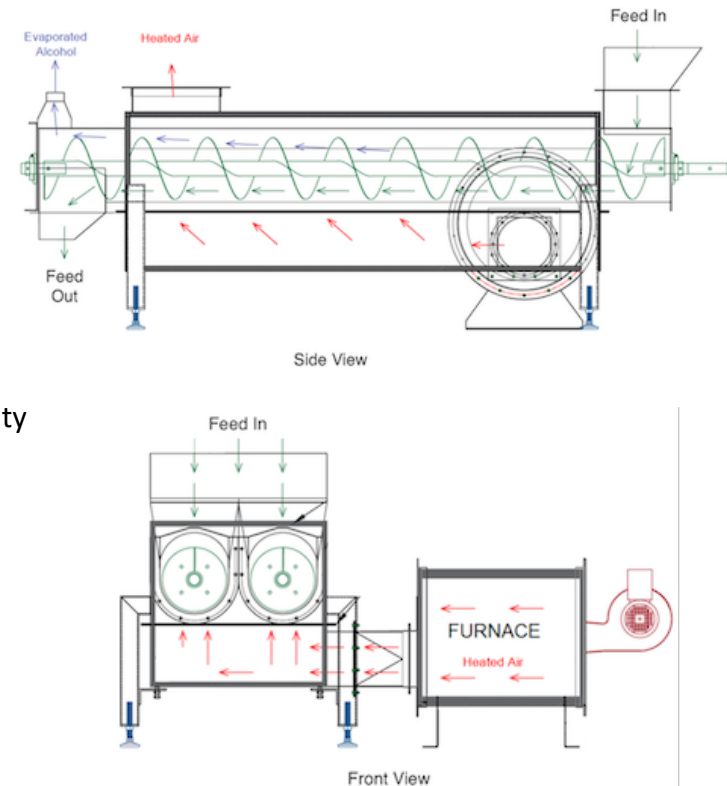
- Recovered ethanol and/or isopropyl alcohol for reuse
- 100% dried post-extraction hemp biomass

ART dryer = Decarboxylation System

- Adjust temperatures and timing to your favorite decarb settings
- Provides precise temperature and timing in large continuous flow volumes

Pricing and Delivery

- Recovery capacities begin at 1,250 pounds per hour (wet feed-in) start at \$250,000
 - 1mm BTU/hr. burner = 11 gallons propane/hr ... 1000 CF NG/hr
- Installation: Minimal relative to dryer
- Delivery: 8-10 weeks



To request a quote or for more information:
Email: Brett Schnepf - bretts@iecompanies.com or call: 425-829-2080
Also visit: www.iec-thermo.com