



# IntelliPET™ Single-Flow Drying Systems

IntelliPET single flow dryers for PET applications with a high percentage of virgin resin such as preforms. Patented energy savings with adaptive process heating control and regeneration optimization.



This innovative drying system enables processors of PET resin to significantly reduce initial cost, equipment footprint, maintenance, and energy costs compared to other PET drying systems.

## IntelliPET Patented System Components Ensure Maximum Efficiency and Minimum Energy Usage

A modified NovaWheel™, an electric or 90%+ efficient gas-fired process heater, a cyclone and a color touch screen with adaptive process heating control and regeneration optimization ensure maximum efficiency.

## Regeneration Optimization

Variable frequency drives on regeneration blower and wheel speed reduce regeneration energy by up to 30%.

## Maintenance and Footprint Reduction of Over 50%...PLUS Lower Initial Cost

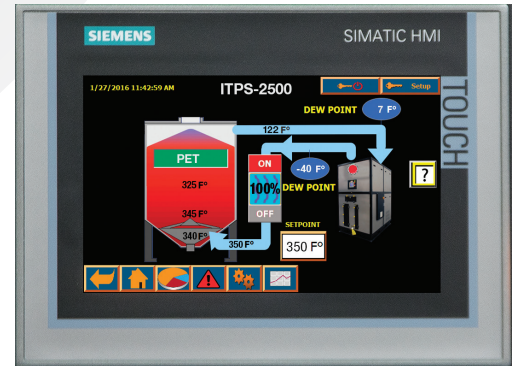
IntelliPET requires fewer system components for reduced maintenance, smaller footprint and lower initial costs compared to other wheel dryer PET systems.

## Proprietary Technology Saves Up To 30+% On Energy Costs

IntelliPET adaptive control and regeneration optimization automatically adjusts air inlet temperatures, blower speed and wheel speed, based on hopper return air temperature, to save energy and ensure consistent drying. Return air temperature is the most reliable indication of material dryness. Continuous feedback from the return air sensor is utilized for automatic adjustment of process settings, providing optimum energy efficiency and uniform drying regardless of initial material temperature, dryness, or throughput rate.

## Each System Matched to Processing Needs

Instead of a "one design fits all needs" approach, IntelliPET systems are matched to your individual requirements.



9" High Resolution Touch Screen PLC with Screen Reflection Standard

## Screen Reflection Standard

Allows a reflection of the screen to be sent to remote devices through a VNC application.

## 5-Year Warranty

For lowest cost of ownership.

## Central Dryer Packages

Available on all models.

## Gas-Fired Process Heater Option

90%+ Efficiency for even greater energy savings. Available all sizes.

### Plus

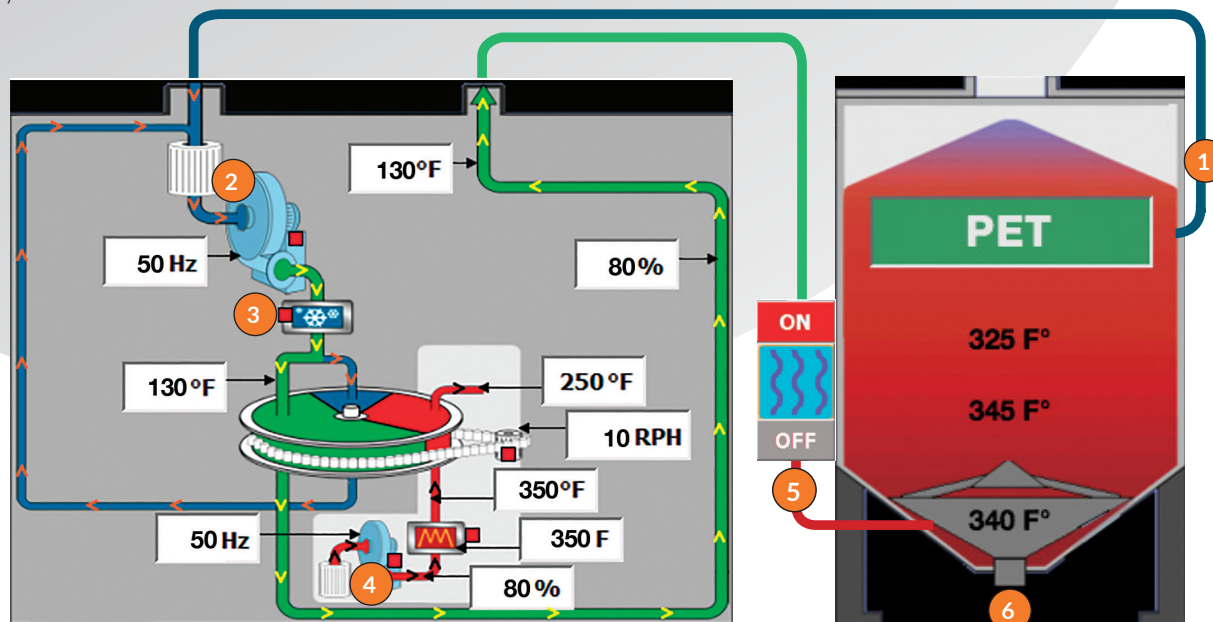
- › Vaisala dew point sensor on process air outlet.
- › Pre-cooler (Return air)
- › 5-Year warranty.

# How It Works

IntelliPET Single Flow System with Patented Adaptive Control and Regeneration Optimization provides automatic adjustment of process temperature and blower speed ensures process consistency, and eliminates the need for operator intervention.

## Key components of the IntelliPet™ Single Flow system:

- › A modified Novatec NovaWheel™ desiccant wheel dryer includes PLC control with Adaptive Process Heating Control and Regeneration Optimization.
- › A multi-zone single flow drying hopper.
- › An electric or 90% efficient gas-fired process heater.
- › A cyclone dust collector.



IntelliPET Adaptive Control and Regeneration Optimization automatically adjusts air inlet temperatures, blower speed and wheel speed, based on hopper return air temperature, saving energy, ensuring process stability and consistent drying.

Note: Hopper temperature sensors are for monitoring/trending purposes only and do not control the drying process.

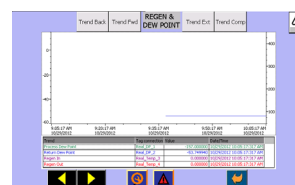
1. The IntelliPET Adaptive Control system monitors hopper return air temperature to optimize air temperature in the upper portion of the hopper through heater and blower speed adjustments, to reduce energy consumption. Patent # 6,951,065,B2
2. Within the dryer, the air is filtered and then enters a blower.
3. The air is cooled before passing through the desiccant wheel and subsequently re-heated before entering the bottom of the hopper.
4. Regeneration Optimization uses a variable frequency drive to control blower and desiccant wheel speed. (Patent # 5,688,305)
5. Air flow and inlet air temperature are constantly monitored and controlled through the Adaptive Control and Regeneration Optimization Control using the feedback from the hopper return air temperature.
6. Guaranteed constant temperature of material exiting the hopper.

## Four Screens Show Real Time Trending On 14 Drying Parameters

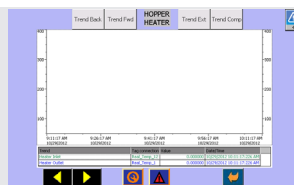
The trending information can be downloaded, providing permanent quality assurance records and exported through Ethernet.



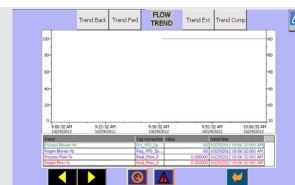
Dryer Trend



Regen & Dew Point



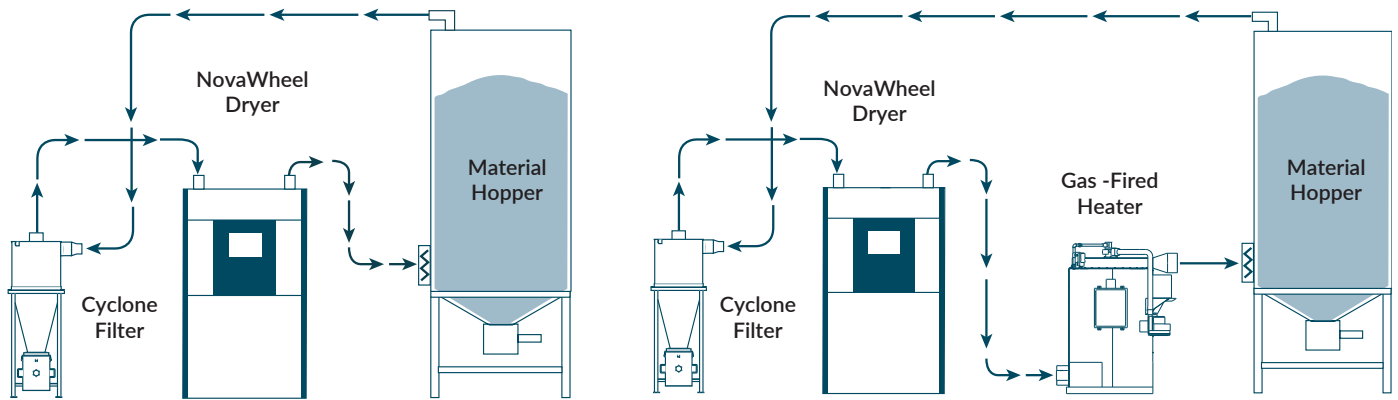
Hopper Heaters



Flow Trend

# Choice of Configurations

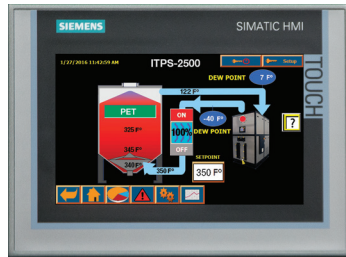
Large volume processors of PET profit most from the IntelliPET system.



Choose either electric or our patented, Gas-Fired process heater with 90% thermal efficiency. An optional self cleaning "pulse" type dust collector is available.

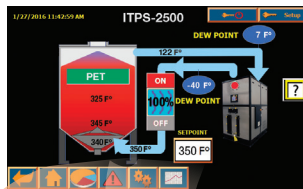
## Hands-Free, Automatic Operation

- › 9" High Resolution touch screen makes initial set-up easy.
- › Provides at-a-glance indications of temperature and blower parameters.
- › Monitors all dryer functions including bed temperature, percent of process air flow and process/regeneration temperatures.



## Ethernet Connection Provides Constant Monitoring

- › Ethernet connection allows access to system through any PC, anywhere.
- › System alarms can be emailed to any email account on a PC, tablet or SmartPhone.



## ITPS 9" Color Touch Screen PLC Features

9" High Resolution Touch Screen PLC	Standard
Control Temperature #1	Standard
Second Set-point	Standard
Over-temperature Alarm and Shutdown	Standard
Real Time Clock	Standard
Seven Day Timer	Standard
Auto Start/Stop	Standard
High/Low Temperature Alarm	Standard
Warning and Error Messages	Standard
Battery Backup	Standard
EEPROM	Standard
Calibration Feature and Set Point Secure	Standard
Set Deviation Limits	Standard
Language Capabilities	Standard
Diagnostics	Standard
Adjust PID Settings	Standard
NEMA 12 Enclosure	Standard
Loader Operation	Standard
Communications Capability	
Ethernet	Standard**
Modem	Optional*
MPI	Optional*
Profibus	Optional*
DeviceNet	Optional*
ASI	Optional*
*As a PLC based option ** With embedded web page	

**Specifications:**

Dryer Model Number	Throughput		Cabinet Size						Cyclone P/N Air-Flow	Air Connection Diameter	
			Width		Depth		Height			in	cm
	lb/hr	Kg/hr	in	cm	in	cm	in	cm			
ITPS-500	500	225	47	119	60	152	86	218	CDC-60 400 cfm 1275 m <sup>3</sup> /hr	6	15
ITPS-750	750	341									
ITPS-850	850	386									
ITPS-1000	1000	450	62	158	84	213	90	229	CDC-80 750 cfm 1275 m <sup>3</sup> /hr	8	20
ITPS-1300	1300	591									
ITPS-1500	1500	682									
ITPS-2000	2000	909	77	196	99	252	95	241	CDC-120 3000 cfm 5100 m <sup>3</sup> /hr	12	30
ITPS-2500	2500	1136									
ITPS-3200	3200	1455			109	227	108	274			
ITPS-4000	4000	1818									

**Hopper Selection:** Consult factory for hopper selection and sizing. Voltage: Standard 460/3/60.

**Options:**

**Alternate Voltage:** (In lieu of 460/3/60) 415/3/50 (no charge) 575/3/60 See price list #105.

**Gas-Fired Process Heater:** 90%+ efficiency (See price list #140)

**Accessories:**

**Process air cooling coil:** On stand or on stand with plasticizer trap. (Required for process temperatures under 170°).



ITPS with Gas-Fired Heater and drying hopper.

