

Vacuum Dryers

ULTRA

ULTRA is the first Ultra low energy dryer based on unique technology for use in the plastics processing industry!

Conventional desiccant dryers typically use 100 watts/kg/hr to dry material.

The Ultra dryers use 8 watts/kg/hr!



The Maguire ULTRA, only available from Summit Systems, is proven to dry plastics 6 times faster than conventional dryers at 85% less energy usage.

Extremely fast drying technology which uses vacuum and no desiccant. Ideal for optical, medical, and technical applications. Typical Maguire “outside the box thinking” with brilliant results added to 80% power savings vs. dehumidifying.

Switching from desiccant to ULTRA saves you a huge 91 watts/kg/hr!

ULTRA dryers quickly pay-back in the short-term and continue to pay dividends through energy reduction in the long-term.

Although the Ultra dryer uses about the same amount of energy as a comparable desiccant dryer to bring resin up to drying temperature, it uses much less energy to dry the material.

GET IN TOUCH TODAY

We solve the most technically advanced plastics automation problems across all industries.



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Vacuum Dryers

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Features and Benefits

► **ULTRA ENERGY SAVING:**

Proven to dry plastics 6 times faster than conventional dryers at 85% less energy usage.

► **ULTRA LOW ENERGY COSTS:**

There is a real difference in energy usage to dry a lb/kg of material with a generic desiccant dryer versus the Maguire ULTRA. Using an ULTRA dryer, you can save £4930 annually doing the exact same job. ULTRA delivers savings year on year for its full life cycle.

► **ULTRA GREEN:**

ULTRA dryers provide further savings from reduced CO₂e - Global Warming Potential (GWP). Running 220 lb/hr (100 kg/hr) provides a saving of 54,120 kW a year. This equates to saving of 38.6 tons CO₂e per year.

► **ULTRA QUICK DRYING:**

ULTRA dryers use vacuum as the main method to dry versus air dew point and is typically 6 time faster than conventional desiccant dryers. This dramatically reduces energy required to DRY material and translates to more production time.

► **ULTRA LOAD CELLS:**

The use of load cells in the vacuum chamber and retention hopper allow the drying rate to match the process rate to achieve ULTRA efficient production.

► **ULTRA LOW MAINTENANCE:**

No scheduled maintenance requirements. No desiccant beds to replace, simpler filter compared to process filters on a desiccant dryer, no regeneration cycles, no cooling requirements.

► **ULTRA EFFICIENT PRODUCTION:**

The vacuum drying process does not rely on hot air to extract the moisture from the pellet. The material is brought up to a set temperature and vacuum is applied to remove moisture. No additional energy used, no excessive material residence time which can affect additives in the material.

► **ULTRA FAST MATERIAL CHANGE AND CLEAN OUT:**

The user-friendly touchscreen controls the available load cell data and allows the operator to set an Auto Stop. The dryer stops with minimal material left in the process to ensure a quick clean out, fast material changes and reduces the risk of material cross contamination.

► **ULTRA SMART DRYING:**

- FlexBus Lite integrated to touchscreen to allow control directly of your loading system to and from the ULTRA dryer.
- Load cells monitor process demand by live lb/hr (kg/hr) consumption.
- Automatic adjustment of amount of material under vacuum and in retention hopper feeding the process.
- ULTRA signals when to release next batch of material.

On a process running 100 kg/hr an ULTRA dryer provides savings of 54,120 kW per year.

This equates to saving 38.6 tons of CO₂e every year!

That's the equivalent of planting 645 new trees, every year, for 10 years!

ULTRA pays for itself, and with costs so low, it almost runs for free!



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ULTRA 3-Step Drying Process

Step 1 - Heating Hopper

The preheated material then feeds by gravity into the vacuum chamber. The amount of material is monitored by a pair of load cells to know the amount of material and adjust if required. A high vacuum is applied to 700 mmHg (90% vacuum) and the material is held under vacuum for 20 to 30 minutes, depending on the material type, initial moisture and required throughput.

Step 2 - Vacuum Chamber

The material is first loaded into a heating hopper to come up to the normal desired drying temperature for that material – for PET typically 40 to 60 minutes at a drying temperature of 338°F / 170°C.

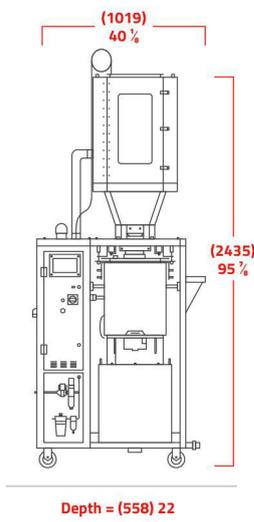
Step 3 - Retention Hopper

The material is fed to the material retention hopper, which is also monitored by load cells. The load cells monitor usage and signal when to feed from the vacuum hopper.

The membrane dry air purge option provides a supply of -40°F / -40°C dew point air to purge the vacuum chamber and blanket the retention hopper.



ULTRA 150 Specifications

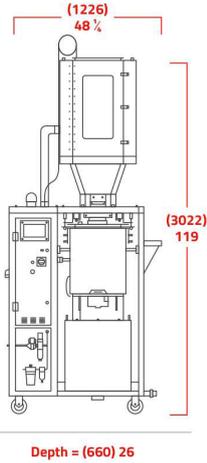


	US	Metric
Throughput	115 lb/hr	50 kg/hr
Practical Heating Hopper Volume	2.5 cu. ft.	70 L
Vacuum Chamber Volume	1 cu. ft.	28 L
Retention Hopper Volume	1.3 cu. ft.	37 L
Max. Temperature	350°F	176°C
Power Requirements	240V, 480V, 575V / 3Ph / 60Hz, 16A, 8A, 7A	400V / 3Ph / 50Hz 10A
Process Heater	10 kW	
Blower	1.1 HP, 105 scfm	0.75 kW, 2973 L/min
Compressed Air Pressure	85 psi	5.86 bar
Compressed Air Usage	5.2 scfm	2.4 N m ³ /hr
Product Weight	501 lb	228 kg

Vacuum Dryers

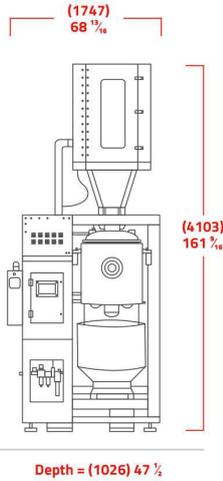
ULTRA

ULTRA 300 Specifications



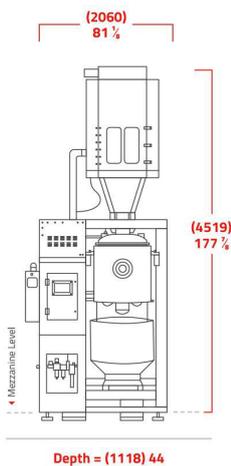
	US	Metric
Throughput	230 lb/hr	100 kg/hr
Practical Heating Hopper Volume	4.25 cu. ft.	120 L
Vacuum Chamber Volume	2 cu. ft.	57 L
Retention Hopper Volume	2.25 cu. ft.	64 L
Max. Temperature	350°F	180°C
Power Requirements	240V, 480V, 575V / 3Ph / 60Hz, 52A, 27A, 22A	400V / 3Ph / 50Hz 33A
Process Heater	15 kW	
Blower	3.5 HP	2.2 kW
Compressed Air Pressure	85 psi	5.86 bar
Compressed Air Usage	3.6 scfm	5.6 N m ³ /hr
Product Weight	918 lb	416 kg

ULTRA 600 Specifications



	US	Metric
Throughput	650 lb/hr	300 kg/hr
Practical Heating Hopper Volume	12 cu. ft.	340 L
Vacuum Chamber Volume	5.5 cu. ft.	156 L
Retention Hopper Volume	6.1 cu. ft.	173 L
Max. Temperature	350°F	176°C
Power Requirements	480V, 575V / 3Ph / 60Hz 49A, 22A	400V / 3Ph / 50Hz 54A
Process Heater	20 kW	
Blower	8.5 HP, 400 scfm	5.5 kW, 5380 L/min
Compressed Air Pressure	85 psi	5.86 bar
Compressed Air Usage	11.2 scfm	17.4 N m ³ /hr
Product Weight	1824 lb	827 kg

ULTRA 1000 Specifications



	US	Metric
Throughput	1100 lb/hr	500 kg/hr
Practical Heating Hopper Volume	26 cu. ft.	739 L
Vacuum Chamber Volume	10 cu. ft.	283 L
Retention Hopper Volume	11 cu. ft.	311 L
Max. Temperature	350°F	180°C
Power Requirements	480V, 575V / 3Ph / 60Hz 67A, 37A	400V / 3Ph / 50Hz 75A
Process Heater	25 kW	
Blower	10 HP, 600 scfm	7.5 kW, 16990 L/min
Compressed Air Pressure	85 psi	5.86 bar
Compressed Air Usage	18.9 scfm	29.4 N m ³ /hr
Product Weight	2950 lb	1338 kg