

www.s4mEquipment.com  
(217) 245-2919

## Two Spray Dryers Available - For Pilot Plant Operation

**Dryer P101: Dryer, electric heater, cyclone. Capacity to 8 pounds solids (output) per hour**

**Dryer P102: Dryer, natural gas heater, cyclone, wet scrubber, VFD fans, PD Sanitary Pump. Capacity to 50 pounds solids (output) per hour.**

**Description for P101 (small dryer):** Pilot Plant spray dryer system. Niro spray dryer Model PE25, serial 8021, built circa 1980. Has atomizer, electric heat, 460v, 60 Hz. Size is 4 ft diameter x 3 ft straight side. Capacity 8 pounds/hour. System was in use until mid 2009.

**Footprint:** Total footprint is approximately 5 ft x 6 ft x 10 ft tall with a discharge stack through the overhead. Has a separate electrical and control panel.



**Operation:** Manually process the batch for drying; heat dryer using electric forced air heater. Feed dryer with peristaltic pump; product comes out the bottom of the dryer chamber. Fines are collected in a small cyclone at the side dropping into a catch chamber. The cleaned forced air is discharged through the vent above roof.



The photo on the left shows the collection cyclone and chamber attachment for fines.

**Construction:** Stainless steel dryer and all connecting parts and canisters. Stand-alone frame for easy installation or relocation.



Feed Pump  
Fines Cyclone

**Uses:** Production of essential oils, flavorings, or small amounts of ingredients. Pilot plant research and testing for non-dairy creamer, synthetic detergent, ingredients, and other spray dried ingredients and products.

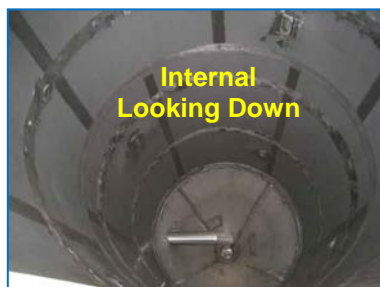
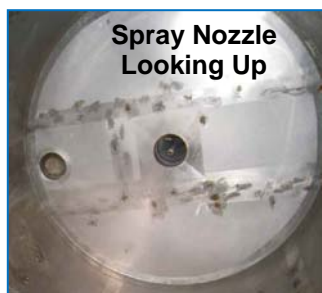
## P102 – SPRAY DRYER



**Description for P102 (large dryer):** Pilot Plant spray dryer system. Capacity 30 pounds/hour, 30 to 75 pound batch size. Includes dryer 6 ft dia x 180 inches straight side, cyclone, wet scrubber, natural gas burner, and 2 VFD blowers. Dryer cone has been replaced within the last 3 years. System was set up to handle non-dairy creamer with solids ranging from 0.45 to 0.7 density and was in use through mid 2009.



**Footprint:** Total footprint is approximately 20 ft x 30 ft x 30 ft tall with a discharge stack through the overhead. Has a separate electrical and control panel. The structural steel, catwalks, ladders, and piping are all included in this spray dryer system



**Operation:** Dryer heat is by a natural gas burner. Product discharges from the bottom of the dryer chamber. Fines are collected in a small cyclone at the side dropping into a catch chamber. The cleaned forced air is fed through a wet scrubber to the vent above roof. Both forced air and wet scrubber air blowers are controlled by a VFD drive.

**Construction:** Stainless steel dryer and all connecting parts and canisters. Structural steel included for easy re-installation.

**Process Flow Schematic:** Attached is a simple process flow schematic.

**Uses:** Production of essential oils, flavorings, or small amounts of ingredients. Pilot plant research and testing for non-dairy creamer, synthetic detergent, ingredients, and other spray dried ingredients and products.



**Terms:** This equipment is part of an Orderly Negotiated Sale and a 10% Buyer's Premium will be charged in addition to the agreed sales price. All equipment is sold As Is Where Is, Subject to prior sale and availability. The equipment could be withdrawn from the market at any time with no prior notice. All quotes are in US Dollars unless specifically noted otherwise. Description of the equipment - especially those relating to capacity, size, or condition - are stated as clearly as possible for information to the buyer or observer. The descriptions and representations cannot be taken as accurate. The buyer has the sole responsibility to determine size, capacity, capability, suitability, condition, or any other attribute pertaining to the piece of equipment represented or purchased. The assets are sold "As Is", "Where Is" and "with all faults" and except as explicitly stated in the Bill of Sale. all warranties, including, without limitation, the warranties of merchantability, quality, and fitness for a particular purpose are hereby expressly excluded. Seller makes no representations or warranties as to design, condition, capacity, performance, or any other aspect of the asset.

**Components:** Go to web site [www.s4mEquipment.com](http://www.s4mEquipment.com) and enter KEYWORD P102Spray for a listing of components. Components are listed below; they are a part of Spray Dryer system P102 and will not be sold separately

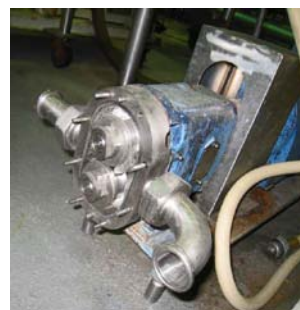
**[Item P205 .Spray Dryer Unit](#)**

Niro spray dryer, stainless steel. Built approx 1985. Size approx 6 ft dia x 180 inches straight side x 25 ft overall height. Cone was replaced within the last 3 years



**[Item P204 .Fines Cyclone](#)**

Stainless steel cyclone and fines discharge.



**[Item P209 .Sanitary Positive Displacement Pump](#)**

Sanitary positive displacement pump.

**[Item P206 .Wet Scrubber](#)**

Wet scrubber with New York blower, shop # X7169-100, size N18P10. Controlled by York air modulator with vfd motor control.

**Terms:** This equipment is part of an Orderly Negotiated Sale and a 10% Buyer's Premium will be charged in addition to the agreed sales price. All equipment is sold As Is Where Is, Subject to prior sale and availability. The equipment could be withdrawn from the market at any time with no prior notice. All quotes are in US Dollars unless specifically noted otherwise. Description of the equipment - especially those relating to capacity, size, or condition - are stated as clearly as possible for information to the buyer or observer. The descriptions and representations cannot be taken as accurate. The buyer has the sole responsibility to determine size, capacity, capability, suitability, condition, or any other attribute pertaining to the piece of equipment represented or purchased. The assets are sold "As Is", "Where Is" and "with all faults" and except as explicitly stated in the Bill of Sale, all warranties, including, without limitation, the warranties of merchantability, quality, and fitness for a particular purpose are hereby expressly excluded. Seller makes no representations or warranties as to design, condition, capacity, performance, or any other aspect of the asset.



**Item P203 .Blower**

Forced air blower for spray dryer burner. Motor is controlled by York Modulator and motor VFD.



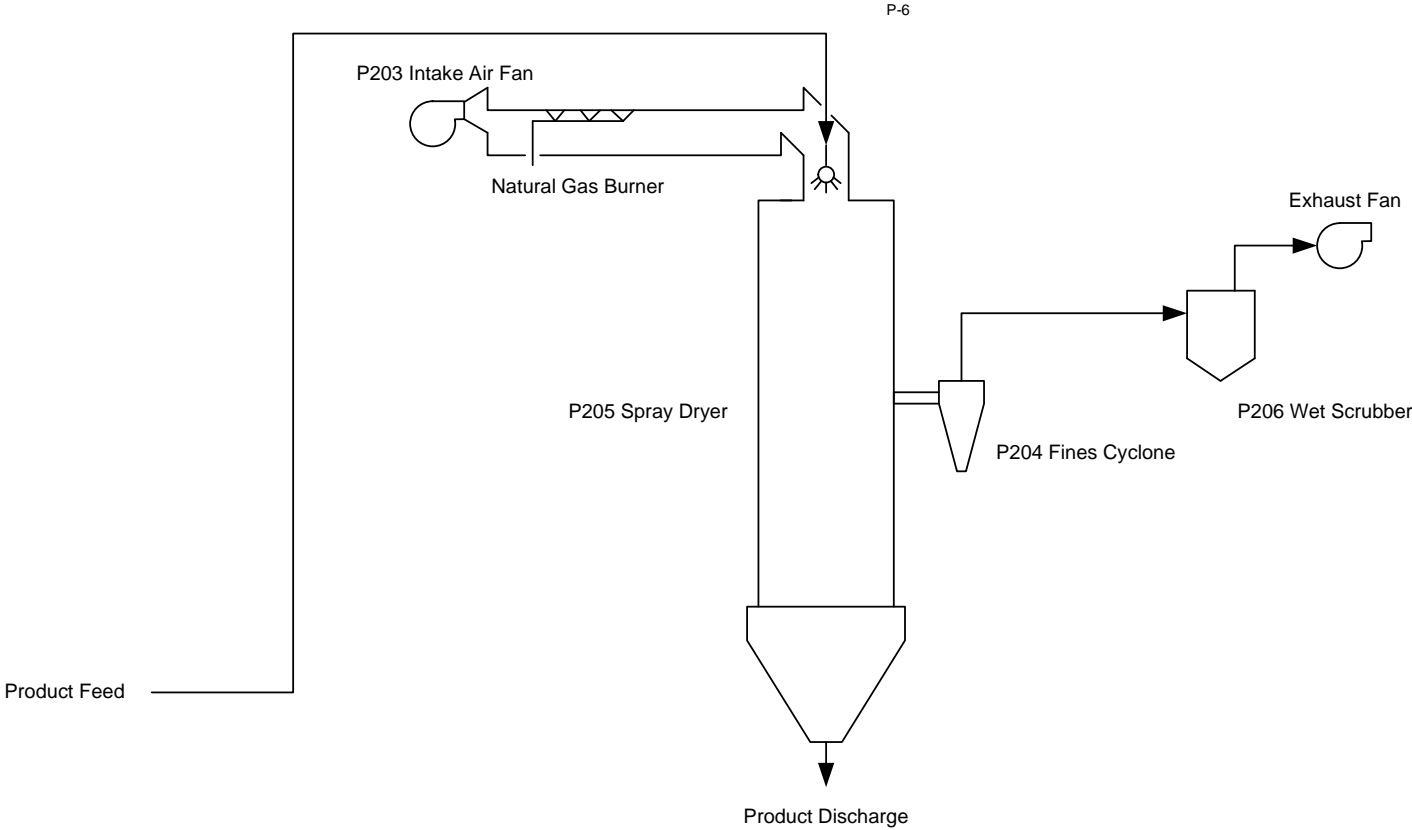
**Item P201 .Control Panel**

Stainless steel control panel for P102 spray dryer. Includes flame safeguard Honeywell BC7000L blue chip.




**Terms:** This equipment is part of an Orderly Negotiated Sale and a 10% Buyer's Premium will be charged in addition to the agreed sales price. All equipment is sold As Is Where Is, Subject to prior sale and availability. The equipment could be withdrawn from the market at any time with no prior notice. All quotes are in US Dollars unless specifically noted otherwise. Description of the equipment - especially those relating to capacity, size, or condition - are stated as clearly as possible for information to the buyer or observer. The descriptions and representations cannot be taken as accurate. The buyer has the sole responsibility to determine size, capacity, capability, suitability, condition, or any other attribute pertaining to the piece of equipment represented or purchased. The assets are sold "As Is", "Where Is" and "with all faults" and except as explicitly stated in the Bill of Sale. all warranties, including, without limitation, the warranties of merchantability, quality, and fitness for a particular purpose are hereby expressly excluded. Seller makes no representations or warranties as to design, condition, capacity, performance, or any other aspect of the asset.

# Pilot Plant Spray Dryer



P201 Control Panel

	<a href="http://s4mEquipment.com">s4mEquipment.com</a>
	217-245-2919
P102 Spray Drying System - Pilot Plant Memphis, TN	