



The sub-micron radiation SPR Technology

OUR SOLUTION IS CENTERED AROUND DRYING WITHOUT CHANGING

The patented SRP is built using the latest sub-micron radiation to dry the most difficult and fragile organic materials in an environment that will not alter the physical shape or constituents of the raw material.

Problematic raw material including low flash or melting points can be dehydrated in the SRP due to the low-temperature environment, which extracts moisture from the material in the form of humid air rather than high temperature steam. This moisture-laden air is extracted from the SRP under vacuum, which aids in reducing the temperature the material will be subjected to, as well as increase the moisture absorption capacity of the conveyed air.

Unlike competing products, the SRP can recover energy from the exhaust stream, in the form of both hot air and hot water, which can then be pumped back at various injection points, significantly reducing energy requirements. Finished materials are discharged on your out feed belt or screw conveyor, or one of our series conveyors.

MODULAR AND MOBILE:

Designed to fit in a 20-foot container, the main chamber is easily disconnected from auxiliaries to be transported to the site. Multiple units can then be stacked in parallel or series, when the required flow rates are significant and footprint desired is minimal. Auxiliaries are also available in house upon request, or can be sourced directly from local distributors.

Applications:

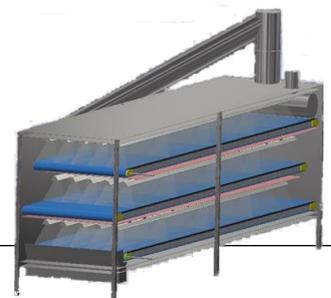
Rotary Dryers subject raw materials to elevated temperatures generating excessive levels of VOCs and presenting significant fire hazards. Plagued with low efficiencies and excessive footprints, these dryers will consume significantly more energy while changing the constituency of your raw material. When dealing with sludge, biomass, agricultural or other organic products and residues, the SRP will dehydrate your material with the least amount of energy, without requiring combustion and subsequent air treatment to meet local regulations.

Wavelength penetration:

Similar to microwaves, sub-micron radiation directs its heating energy into the process material, rather than heating the air surrounding the material, which then transfers only a portion of its energy to the material.

Contrary to popular belief however, microwaves can only penetrate into the center of the material when the surface layers are first dried.

Offering deeper penetration into the cell walls of the process material, sub-micron wavelengths transfer their heating energy through all the layers of the process material, rather than being limited to heating its surface, and do not alter the constituency of the process material.





Electromagnetic field:

Electrically powered devices all emit EMF radiation to various degrees. Microwaves and other devices operating in the 300MHz to 2.4GHz range have all been demonstrated to cause brain and nervous system disturbances and/or damage. Unlike these devices, sub-micron radiation does not emit electromagnetic fields in a frequency range that is known to be harmful.



Process flow:

Raw material is discharged on a material bin, which then feeds a pre-heating conveyor. Conveyed material is discharged into the main chamber, subjecting the material to sub-micron radiation through multiple levels. Material is discharged from the bottom of the chamber, while moisture-laden air is evacuated from the top of the chamber under vacuum. Evacuated air passes through a heat exchanger, re-capturing a significant portion of heat. Recovered heat is re-injected at various points, and assists in both pre-heating and dehydration. Processed material is then pneumatically conveyed to a cyclone, precipitating particles to the bottom discharge, while exhaust air is vented from the top.

Equipment Specifications

Model:	SRP 1000	SRP 2000	SRP 3000	SRP 4000
Treatment Capacity:	1000 lbs / h	2000 lbs / h	1600 lbs / h	4000 lbs / h
Treatment Material:	Pomace	Sludge	Fruit	Animal Feed
Raw Material Max Size:	15 mm	5 mm	30mm	1mm
Raw Material Moisture Content:	58%	67%	85%	55%
Final Moisture Content:	33%	45%	23%	19%
Installed Power:	115 kW	230 kW	345 kW	450 kW