



微電腦滾輪乾燥機

MICROCOMPUTER DRUM DRYER



帝策實業股份有限公司
LISKY-TW ENTERPRISE CO.,LTD.

TEL:886-5-6221192
FAX:886-5-6223017
<http://www.liskyfood.com.tw>
E-mail:lisky.food@msa.hinet.net

微電腦滾筒式乾燥機 MICROCOMPUTER DRUM DRYER

高效率！

HIGH EFFICIENCY !

高產能！

HIGH PRODUCTIVITY !

全自動化！

TOTALLY AUTOMATIC !

改良傳統式滾筒乾燥下列缺點：低產能、產品厚薄度不均、調整不易、輪面溫度不易控制、糊化不完全、乾燥度不均勻、噪音大、操作調整不易

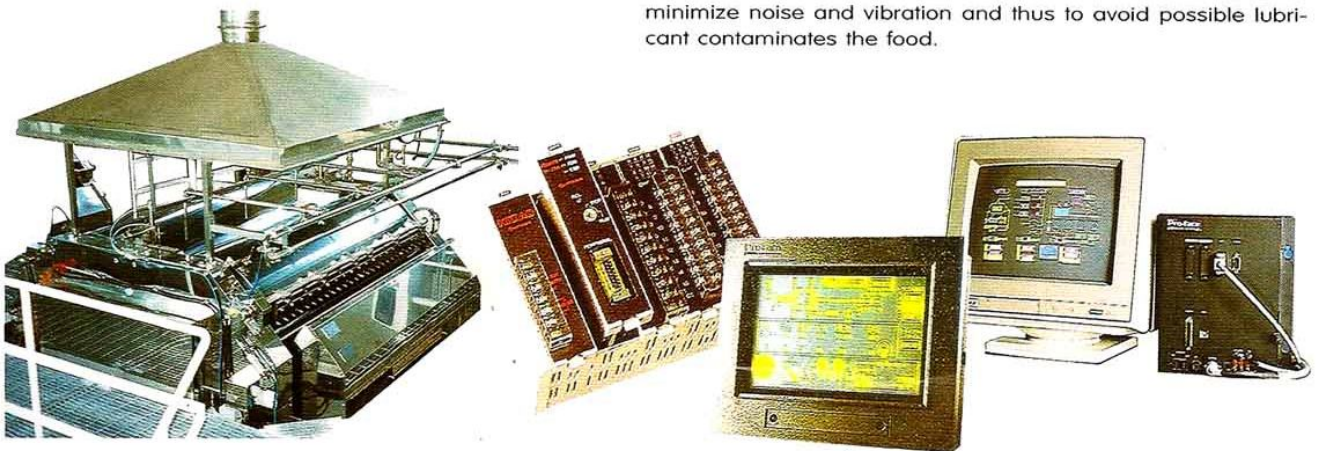
IMPROVES CONVENTIONAL DRUM DRYER'S DISADVANTAGE OF LOW PRODUCTIVITY, UNEVEN PRODUCT THICKNESS, UNEASY TEMPERATURE TO CONTROL, INCOMPLETE GELATINIZATION, INCOMPLETE DRYNESS, AND INCONVENIENT TO MAKE PROPER ADJUSTMENT DURING OPERATION.

具有下列優越之性能：

1. 全自動送蒸氣、送氣壓、開機、上下刮刀、送料與關機功能。
2. 比傳統機組多出 20% 之產能。
3. 可選擇手動控制，自動控制與全電腦控制。
4. 可輕易與週邊設備連線操作。
5. 隨時顯示與監控產品厚薄度、溫度、壓力、轉速、線速與產能。
6. 隨時記錄生產每一分秒之情況，利於品質控制。
7. 簡易操作之人機界面，使各項參數設定在控制器即可輕易完成。
8. 能源回收裝置，提高熱效率。
9. 故障顯示與警報功能，故障排除方法顯示功能，故障排除後自動解除故障顯示。
10. 滾輪表面溫度與滾輪轉速穩定，可任意設定。
11. 獨立驅動之馬達與減速機，可單滾輪使用操作。
12. 直結式驅動馬達與全密閉小型減速機，噪音振動小，不會有潤滑油外洩污染食品問題。

FEATURES :

1. Totally automatic in supply of steam and pressure control of scrapers, feed and operation on - off control.
2. Productivity is 20% higher than any conventional drum dryers.
3. Dual selection of either by manual or automatic or full computerize control.
4. Compatible to connect with other peripheral equipments.
5. Continuously display and monitor the product thickness, and machine's temperature, pressure, speed, line speed and production conditions.
6. Constantly recording of production condition, to ensure quality control.
7. Intelligent interface, capable of input all data on the controller.
8. Energy recyclable device enlarges heat efficiency.
9. Alarm and trouble device, which is capable of display trouble and possible trouble shooting method, operation automatically resume after trouble removed.
10. Stable and adjustable roller surface temperature and roller speed.
11. Independent driven motor and reducer, can be operated with single roller.
12. Direct driven motor and totally enclosed small reducer to minimize noise and vibration and thus to avoid possible lubricant contaminates the food.



本公司備有中間試驗工廠 (PILOT PLANT) 歡迎客戶利用

簡介：

滾筒式乾燥機，是一種連續式間接加熱型的乾燥機，將待乾燥液體或泥狀原料，經由給液裝置塗佈在蒸氣加熱的滾筒上，附著在滾筒的原料隨著滾筒旋轉約半圈後，即由刮刀將乾燥後的薄膜由滾筒表面刮下，再經由輸送機送至粉碎機粗碎成薄片狀或細碎成粉末狀。

一般產品的製造，乾燥是製程中成本較貴的一環，相對於其它的方法，它的機構設計簡單，性能優越，安裝容易，操作員不需要特別的訓練即可操作，機器的清理與維護容易。加工過程每公斤水份的蒸發，只消耗 1.2 公斤至 1.4 公斤蒸氣，熱效率達 70% 至 80%。加工過程除了少量的粉塵外，沒有二次公害的問題。面對環保要求日益嚴格，它不僅是一部沒有污染的機器，同時也是一部污染處理的好機器。

滾筒式乾燥機有單滾筒型與雙滾筒型，雙滾筒型又分為對向旋轉型與反向旋轉型。

INTRODUCTION：

Drum dryer, is a continuously indirect heating style dryer. The basic mechanism is using a liquid feeder to spread the liquid or paste based material to be dried onto the surface of steam heating drum, and allow them to rotate together after half of the cycle, then uses a scraper to scrap off the dried

membrane adhered on the drum surface, and place the dried membrane to a conveyor and transfer to the crusher to make into flake or powder form.

In most of manufacturing process, drying is considered the more costly part. But in relative to other drying method, our drum style dryer has the advantage of lower investment cost, and low energy consumption. Its machine structure is simple, but with superior capability, and machine is easy to install and operate, no special staff training required.

During processing, water evaporation consumes about 1.2 ~ 1.4 kilo of steam per kilo water, heating efficiency reaches level of 70 ~ 80 %, and aside from small amount of dust occurred, there will be no more second contamination, which fulfills the high demand of environmental protection requirement today.

Our drum dryer is classified into single drum and double drum style, and double drum is further divided into same direction rotating style and opposite direction rotating style.

特性：

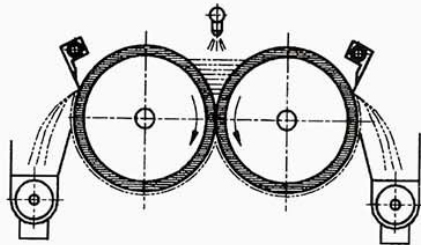
1. 乾燥時間短，乾燥時間約 10 至 20 秒，可連續乾燥。
2. 液體、泥狀物、懸濁液等原料，可直接固化乾燥。
3. 熱效率高，熱效率達 70 % 至 80 %，蒸氣消耗量少，每公斤的水蒸發，只要 1.2 至 1.4 公斤蒸氣量。
4. 操作簡單，清潔、維護容易，機械壽命長，沒有二次公害。
5. 用途變更容易，適合少量多樣化生產。
6. 乾燥時間與乾燥溫度可按加工需求任意設定。
7. 乾燥過程，可將原料完全處理至最後一滴，沒有殘留液。
8. 大小批量均可加工，熱敏感物質可加裝真空裝置。

FEATURES：

1. Short drying time about 10 ~ 20 second, and capable of continuous drying.
2. Capable of directly solidify liquid, paste and suspensive materials after dried.
3. 70 ~ 80 % heating efficiency. Low consumption of steam, about 1.2 ~ 1.4 kilo of steam per kilo of water.
4. Easy operation, maintenance, and long machine life.
No second contamination to the environment.
5. Easy to change machine functions, suitable for multiproduct production, but small quantity.
6. Adjustable drying time and temperature, according to processing requirement.
7. Able to dry up all materials completely.
8. Can process any quantity of material, and heat sensitive material can add vacuum device.

給料系統

FEEDING SYSTEM

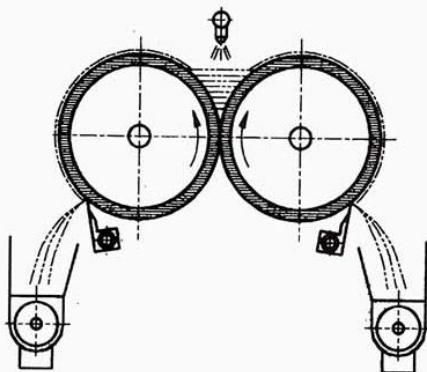


A. 中間給料，對向滾動型

最簡單，使用最普遍之機型，只要調整雙滾輪的間隙即可產生不同厚度薄度的產品，適用產品如酵母、牛乳、乳清粉、色料…等。

NIP FEED SYS.

Simplest type of feed, suitable for yeast, milk, whey, pigment, The thickness of this layer Can be altered by changing the gap setting.

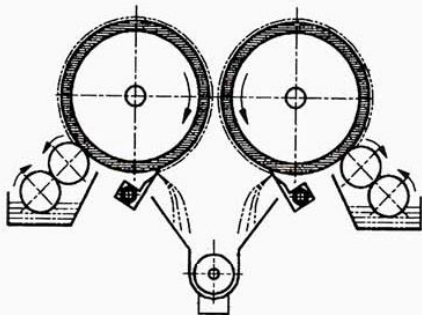


B. 中間給料，反向滾動型

適用於含水量較高的液體原料，如廢棄物的污水等環保工程應用，利於水蒸氣的蒸發與排放。

NIP FEED SYS. OPPOSITE ROTATION

The machine has been developed for drying liquid material with a high percentage of moisture, used for waste water, Drying ... ect.

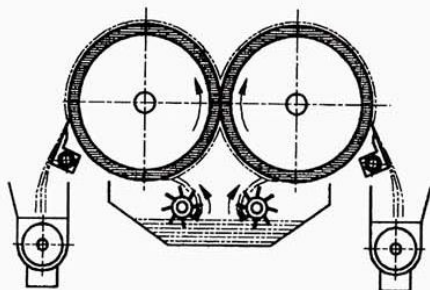


C. 雙塗佈輪下側給料，對向滾動型

適用於熱敏感性加工原料，如阿拉伯膠、牛乳、乳製品及清潔劑，縮短原料與主乾燥熱輪接觸時間，屬薄片型加工方法。

DOUBLE APPLICATOR ROLL FEED SYS.

Specially designed for heat sensitive materials. The material is in contact with hot drum for the min. time. such as arabic gum, detergents, milk-and dairy materials.



D. 底部兩側噴料，反向滾動型

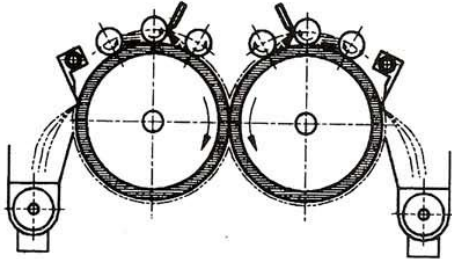
適用於沉澱率高之加工原料，由底部之噴料攪拌機不斷向輪面噴料，並攪拌原料，以預防原料沉澱。

SPLASH FEED SYS.

Especially useful for materials with a high rate of Sedimentation.

給料系統

FEEDING SYSTEM

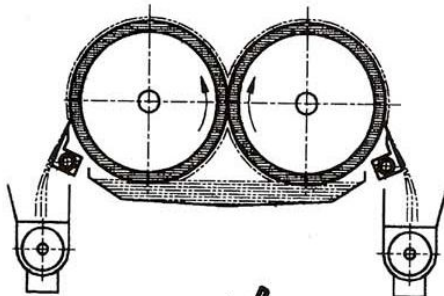


E. 多塗佈輪頂部給料，對向滾動型

集合單滾輪與雙滾輪功能，適合嬰兒食品，即溶食品的加工處理，如麥片、馬鈴薯片、澱粉等黏性原料。透過多個塗佈輪的給料或輾壓可增減製片的厚薄度。

MULTIPLE APPLICATOR ROLLS FEED SYS.

Suitable for glutinous materials such as starch and flour, baby food and instant food industry.

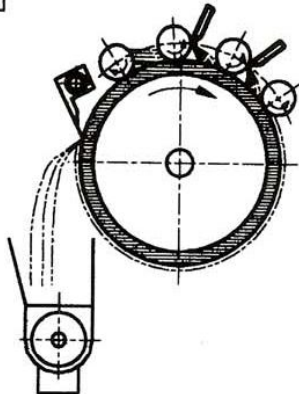


F. 浸漬式底部給料，反向滾動型

適用於懸浮固體溶液，通常將溶液以循環方式置入滾輪下方底盤，由浸入溶液中之滾輪將欲乾燥之懸浮固體附著在輪面。

DIP FEED SYS.

Used for certain suspensions of solids, usually with recirculation of material in the tray.

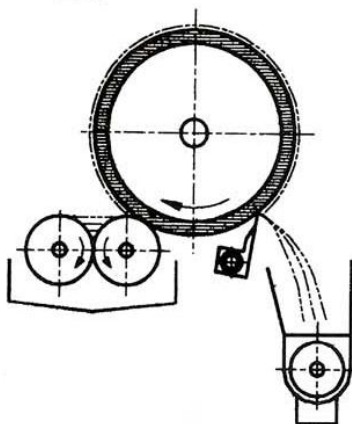


G. 多塗佈輪頂部給料，單滾筒型

功能與 E 型同，適合處理糊狀或果泥產品，塗佈輪在加工過程具揉捏功能，可預防膠黏狀原料結塊，典型加工產品：預糊化澱粉、麥粉系列嬰兒食品、馬鈴薯片、蔬果片。

SINGLE DRUM DRYER WITH MULTIPLE APPLICATORS ROLLS FEED SYS.

Used for increasing film thickness for cereal-based baby food, potato flakes, fruit flakes, ect.



H. 雙塗佈輪下側給料，單滾筒型

適用於熱敏感性加工原料，縮短原料與主乾燥熱輪接觸時間，為薄片型加工方法，加工產品有阿拉伯膠、牛乳、乳製品、清潔劑等。

SINGLE DRUM DRYER WITH DOUBLE APPLICATOR ROLL FEED SYS.

Specially designed for heat sensitive materials. The material is in contact with the hot drum for the min. time. Such as arabic gum, detergents, milk-and dairy materials.

適合加工產品

◎食品加工業：

- 嬰兒食品：
 - 麥粉類食品
 - 米粉類食品
 - 奶粉類食品
 - 複合配方食品
- 三合一麥片
- 蔬菜薄片
- 薏仁片
- 馬鈴薯片
- 健康食品
- 兒童食品
- 早餐食品

◎粉加工業：

- 糊化澱粉
- 樹薯粉
- 玉米粉
- 米粉
- 小麥粉
- 芋頭粉

◎乳酪業：

- 奶粉：脫脂奶粉
- 乳酪粉
- 全脂奶粉

◎化工業：

- 黏合劑、凝固劑和乳化劑製造業
- 阿拉伯膠
- 漢生膠
- 卵磷脂
- GUAR GUM
- ALGINATE

◎膠質製造業：

- 明膠類
- 澱粉類
- 合成類

◎環保類：

- 油墨
- STOCK GLUE
- MYCELUM
- ANTIBIOTIC MEDIUM
- MOTHER LIQUOR

◎飼料類：

- 水產飼料(魚、蝦、鰻)
- 豬飼料
- 酵母粉

◎特殊產品加工

對於熱敏感性物質，可加裝真空裝置，減低乾燥溫度至80℃左右，確保加工原料營養不流失。

◎典型加工產品：

木瓜、菠菜、綠茶、豆腐、香蕉、酒粕、柳橙、地瓜、蝦、烏賊、章魚、鮭魚、南瓜、薑、胡蘿蔔、蒜頭

◎SPECIAL PROCESSED PRODUCTS:

Papaya, Spinach, Green tea, Tofu, Banana, Orange pulp, Sweet potato, Shrimp, Squid, Octopus, Salmon flake, pumpkin, Ginger, Carrot, Garlic,



Materials Processed on Lisky Drum Dryers

FOOD

Baby Food & Infant Food
Breakfast Food
Buttermilk
Cereal (Infant Food)
Casein
Corn Syrup
Essence
Flour
Kaffir Corn
Mealie Meal
Milk (Skim and Whole)
Oats
Oat Flour
Onion Puree
Pease Pudding
Potatoes
Rice (Starch)
Semolina
Starch and Flour
Tapioca Starch
Vegetable Protein
Whey
Wheat Starch
Yeast

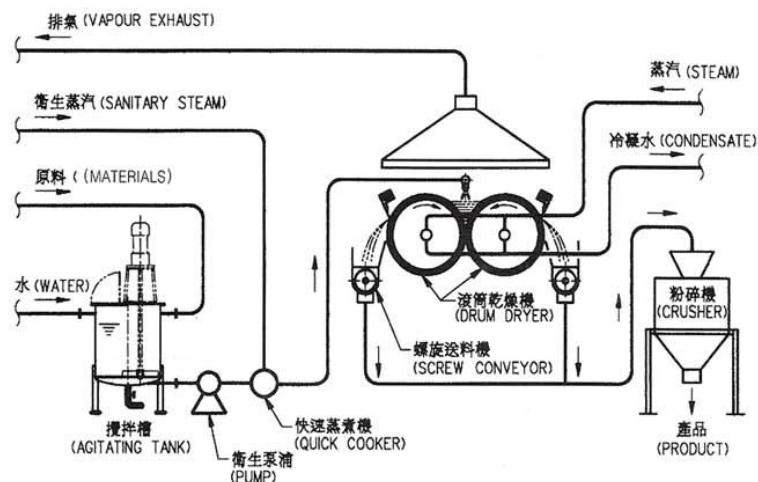
Special mention should be made of the use of roller dryers for the manufacture of "Instant Foods" and for pregelatinization and drying of starches

CHEMICAL

Alkyl Aryl Sulphonate
Alumina Slip
Anhydrous Sodium Sulphate
Barium Hydrate
Barium Sulphate
Calic Sulphite
Calcium Acetate
Calcium Pantothenate Solution
Calcium Propionate
Ceramic
Chromium Sulphates
Detergent
D.D.T.
Dyestuffs
Fatty Alcohol Sulphates
Fermentation Broth
Ferric Ammonium Citrate Syrup
Ferrous Sulphate &
Ferrous Ascorbate Solution
Gelatine
Glaubers Salts
Glue
Iron Oxide Slurry
Lead Sulphate
Lithopone
Magnesium Carbonate
Magnesium Oxide
Metallic Stearate
Polymer Gel
Resin

Sodium Acetate
Sodium Benzoate
Sodium Caprylate
Sodium Dichromate
Sodium Formaldehyde Bisulphite
Sodium Hypophosphite
Sodium M.B.T.
Sodium Nitrate
Sodium Pentachloropentate
Sodium Sulphate
Sodium Toluene Sulphonate
Streptomycin Sulphate
Sulphonated Naphthalene
Tripolyphosphate
Drum Dryers are successfully used for the recovery of solvents

Blood
Effluent (Distillery)
Maize Gluten
Molasses Fermentation Residue
Starch – all types
Seaweed Extract
Stick Liquor
Steep Liquor
Tannery Sludge
Whale Solubles
Yeast (Extracted)
Etc., etc., etc.,



流程圖 FLOW CHART

標準機種規格表

Standard sizes in constant production

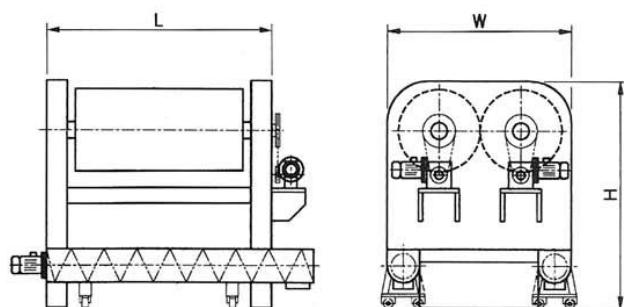
Model	Dimensions		Drum Dia	Drum Length	Heating Surface	power	Working Pressure	Approx Size
			mm	mm	m ²	HP	kg / cm ²	L × W × H _{cm}
LK3050D			300	500	0.9	1	6	125 × 72 × 100
LK5060D			500	600	1.8	1	6	135 × 92 × 111
LK7605D			760	500	2.3	2	6	150 × 190 × 175
LK7610D			760	1000	4.7	2	6	200 × 190 × 175
LK7615D			760	1500	7.1	3	6	250 × 190 × 175
LK7620D			760	2000	9.5	4	6	300 × 190 × 175
LK9310D			930	1000	5.8	4	6	205 × 210 × 195
LK9315D			930	1500	8.7	4	6	255 × 210 × 195
LK9320D			930	2000	11.6	5	6	305 × 210 × 195
LK1520S			1500	2000	9.4	3	6	305 × 180 × 195

Remark D: Double drum S: Single drum

週邊設備 STANDARD AUXILIARIES

- 1.皮帶式收料機
- 2.螺旋式收料機
- 3.溫度自動控制系統
- 4.自動給料系統
- 5.碎片機
- 6.粉碎機
- 7.微電腦監控系統
- 8.調料槽
- 9.混合機
- 10.快速蒸煮機

- Belt Type Conveyors for the collection and remove of dried product
- Screw Type Conveyors for the collection and remove of dried product
- Automatic temperature Control sys.
- Automatic feed Control sys.
- Flakes breakers
- Pulverizer
- Microcomputer Control sys.
- Formula tank
- Mixer
- Quick cooking sys.



帝策實業股份有限公司
LISKY-TW ENTERPRISE CO.,LTD.

TEL:886-5-6221192
FAX:886-5-6223017
<http://www.liskyfood.com.tw>
E-mail:lisky.food@msa.hinet.net