

☑ integrated ☑ split ☑ continuous ☑ single, multifunctional unit

Satisfy your drying needs

# Heat Pump Drying Catalogue

On-order R&D and  
manufacturing

HEAT PUMP

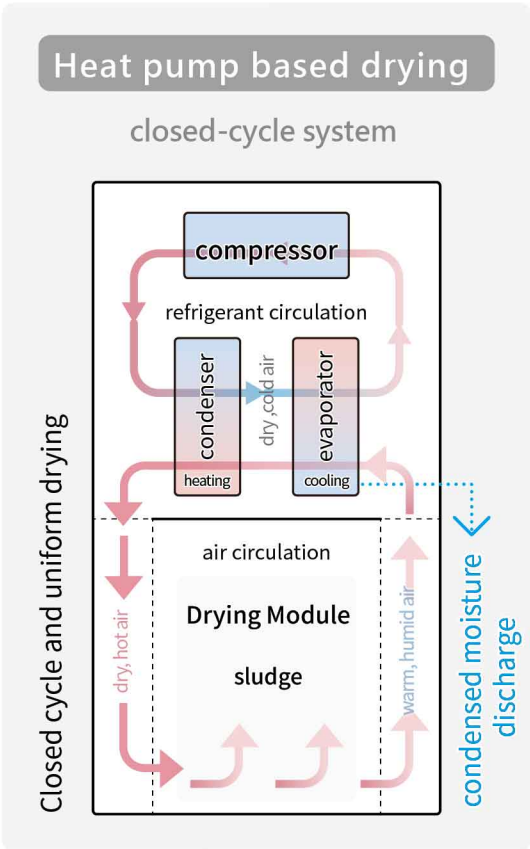
## A number of patented technologies

Test run available to find the most suitable system  
Learn the benefits before procuring it !



# LOW TEMPERATURE DRYING CAN DO MORE THAN EXPECTED

Is it amazing that you can cut the treatment costs lower than removing them while maximizing resource utilization by simply adding a drying process?



※ High temperature features available if necessary, or according to existing energy planning.

The cost for 1-ton <sup>\*1</sup> moisture reduction

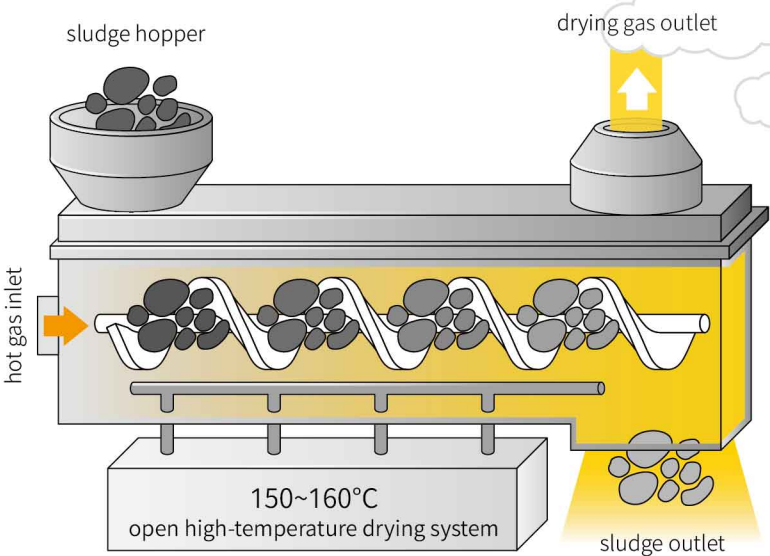
unit : USD	\$30	\$56	\$68	\$142
	<b>DEWTEK Heat Pump</b>	<b>Natural Gas</b>	<b>Diesel</b>	<b>Electric Heating</b>
Airtight	closed cycle	open	open	open
Drying temp.	60°C ↓	80~300°C	80~300°C	80~300°C
Environmental device	none	Required to go with supporting features including exhaust gas treatment, deodorization device, and dust collection.		
Implicit Cost			fuel tanks required	
Other	Low temperature reduces dust explosion	high temperature and pressure	high temperature and pressure	Large current tends to cause fire

※ The unit price of energy varies and does not include the costs of replenishing heat. Diagrams included here are for reference only.

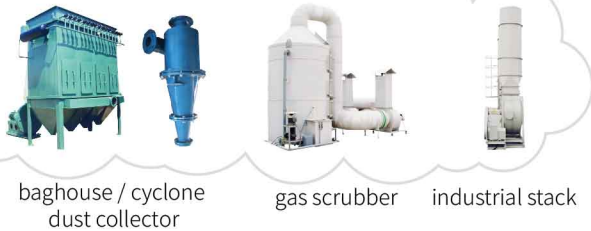
Notes : ① Costs for drying 1 ton of sludge = unit price (CNPC data) ÷ calorific value kwh (data by the Bureau of Energy, MOEA) × equipment energy consumption standard value kwh/ton ② Actual figures may vary with different conditions.

# DROP YOUR ECO-FRIENDLY DEVICES AND MAKE DRYING OPERATIONS EASIER

Gas discharged by open high-temperature drying systems in their drying operation would result in extra maintenance costs.



## AIR POLLUTION CONTROL EQUIPMENT



## GREENHOUSE GAS AND CARBON EMISSIONS OUTCOME

Compared with natural gas, it can save $\frac{1}{3}$ of carbon emissions per year <sup>*3</sup>	<b>DEWTEK HEAT PUMP DRYER</b>	<b>NATURAL GAS DRYER</b>	<b>PADDLE DRYER</b>
energy consumption for weight reduction	500 kwh/ton	1,490 kwh/ton	1,490 kwh/ton
Annual carbon emissions per ton	80 ton CO2e/kwh	117 ton CO2e/kwh	142 ton CO2e/kwh

Notes : ① Default drying time for the system is 320 days/per year. ② The conditions for measuring weight loss required energy consumption: ambient temperature at 25~38°C, dehydrated sludge with initial moisture content at 60%~80%. Actual figures may vary with different conditions. ③ The amount of carbon emissions is counted on the basis of 2.606 kg CO<sub>2</sub>e/L for diesel and 2.17 kg CO<sub>2</sub>e/L for natural gas (set in the Greenhouse Gas Emission Coefficient Management Table by the Environmental Protection Agency) and 0.502 kg CO<sub>2</sub>e/kwh for electricity (by the Energy Bureau of the MOEA 2019). The actual amount of carbon emission may vary with drying conditions and is for reference only.



## WHY USERS PREFER DEWTEK TO OTHERS

- ➔ **Like the heart of a human being** <sup>\*1</sup>  
Scroll compressors by leading American manufacturers leave you with peace of mind.
- ➔ **Government certified IE3 energysaving blowers** <sup>\*2</sup>  
High-efficiency wind turbines ensure lower energy costs.
- ➔ **On-order R&D and local made**  
The R&D team comes with talents from leading air conditioner makers in Japan; it has won six technology patents.

## CONTROL SYSTEM INTEGRATION



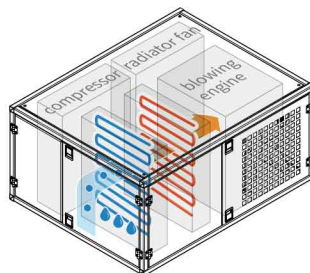
Optional industry 4.0 service and monitoring system

- ➔ PLC program control ◦

In addition to managing costs with the data from the system, the smart system gives early warning of failures for the management to make decisions and take action timely.

## HEAT PUMP DRYER FEATURES

### 1 PATENTED COMPACT DESIGN



#### Smaller main unit

Compact design reduces the footprint of the equipment and enables it to stack and fit into limited space



Invention patent No. I716118

### 2 PROFESSIONAL ANTI-CORROSION TECHNOLOGY



#### Enhanced core protection

Subject the system (including the elbows) to t-layer coating, along with.

- ✓ 40,000 hours of neutral salt spray test.
- ✓ 1000 hours of UV and acid salt spray test.
- ✓ At up to 0.5% heat loss.

### 3 MULTIPLE SAFETY PROTECTION



High and low pressure protection



Overload protection

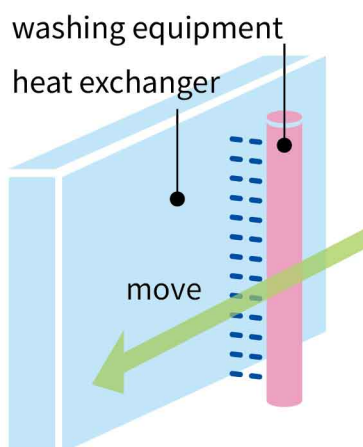


Prevent outlet temperature from being too high



Without reverse phase check

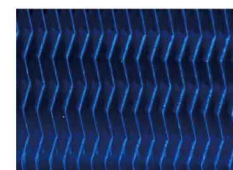
## EXCLUSIVE AUTOMATIC CLEANING FOR HEAT EXCHANGER



➔ Automatically wash off dust

### Why is regular cleaning required?

Surface of the equipment may get covered by a large amount of dust by different types and extents of drying operation; this may hamper the drying efficiency and require regular maintenance.



Normal surface



Surfaces of equipment under improper maintenance

# INTEGRATED / BATCH DRYING EQUIPMENT

## The smallest model in the industry thanks to multiple invention patents

The system can be fitted into an area up to 0.76sqm the main unit and the feeder tank can be designed according to users' processing capacities to optimize the drying performances and save electricity and money at the same time.



### PATENTED DIVERSION DESIGN

Flow airs from bottom to top with a special designed air duct to get a greater air contact area and more uniform drying.

➔ Optional mixer may be added



➔ Dual trolley

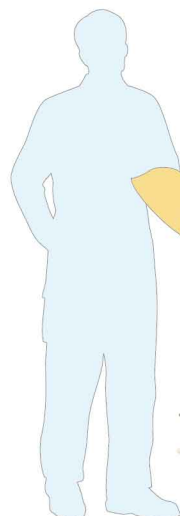


➔ Drying basket



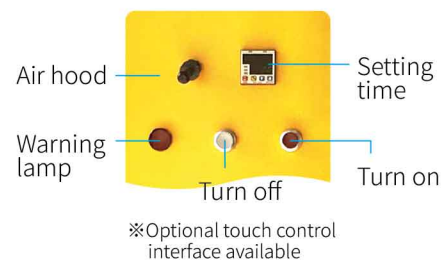
## More options

For greater processing capacities, you may opt to add more loading jigs or choose trolleys or drying baskets instead.

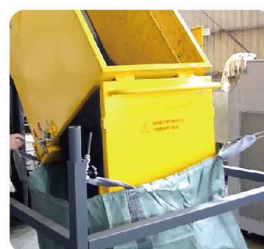


## SIMPLE CONTROL

Simple design : power on the equipment, set the air hood and timer and the system will run as required.



### Side opening



### Bottom opening



※Cases (just a few of them)

Model	Recommended processing volume (moisture content) kg/day		Weight reduction capability		Energy consumption(host)		Minimum area requirements (sqm)	Mini	Single trolley	Dual trolley	Drying basket
	70%→40%	80%→40%	kg/day	kg/hr	kw	kwh/kg					
SD-75	150	112.5	75	2.8~3.4	1.7~2.1	0.4~0.6	0.76	●			
SD-100	200	150	100	3.8~4.6	2.1~2.6		0.76	●			
SD-125	250	187.5	125	4.7~5.7	2.3~2.9		0.76	●			
SD-150	300	225	150	5.6~6.9	2.6~3.2	0.4~0.6	1.75		●		
SD-200	400	300	200	7.5~9.2	4.8~6		1.75		●		
SD-300	600	450	300	11.3~13.8	5.2~6.5		1.75		●		
SD-400	800	600	400	15.0~18.3	7.3~9.1	0.3~0.5	3.17		●		●
SD-500	1000	750	500	18.8~22.9	12.2~15.2		3.17		●	●	●
SD-600	1200	900	600	22.5~27.5	12.2~15.2		3.17			●	●
SD-800	1600	1200	800	30.0~36.7	13.0~16.2		4.83			●	●
SD-1000	2000	1500	1000	37.5~45.5	16.0~20.0		5.03			●	●
SD-1200	2400	1800	1200	45.0~55.0	20.5~25.6		5.03			●	●

Notes : ❶ Recommended Processing Volume is under the condition of 50~66% sludge weight reduction; the actual capacity is subject to the weight reduction capability in accordance with the sludge's water content. ❷ The default drying time for the system is 22 hours per day. ❸ The standardized operating environment for the whole system is outside air temperature ranged 12~38°C; optional low-temperature auxiliary system is required to operate under 12°C. ❹ With all operation conditions met, the energy consumption for weight reduction is 0.4~0.6kwh for model SD-75~SD-300 and 0.3~0.5kwh/kg for model SD-400 and above. ❺ The conditions for measuring weight loss required energy consumption: ambient temperature at 25~38°C, dehydrated sludge with initial moisture content at 60%~80%. Actual figures may vary with different conditions. ❻ The footprint of your system may vary with models of the drying boxes, and the area occupied is for reference only. ❼ The content of catalogue is subject to change based on the actual requirements and working conditions. The Company reserves the right to make changes in designs.

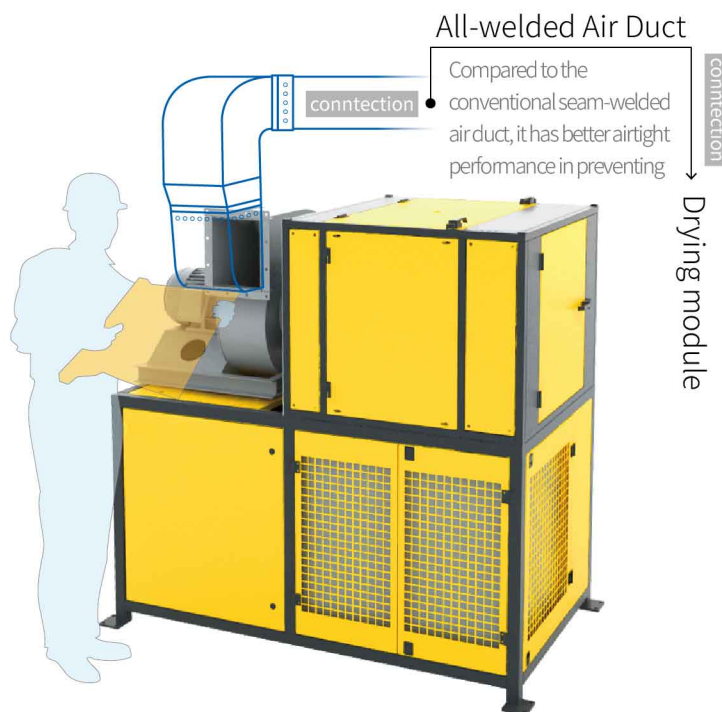


## Diverse configuration to meet various drying requirements

The single main unit series is ideal for users with more environmental constraints, special production lines in the factory, and exclusive drying requirements; Dewtek is always ready to work with you to integrate and plan the system you need.



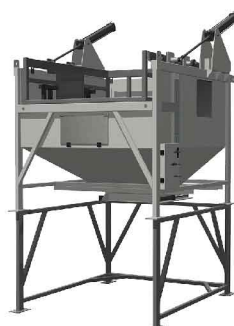
→ Cases of configuration for equipment adapted to limited space of chemical plant



## DRYING MODULE



Example of dual drying box connection



→ Drying basket's gravity driven feeder

## CASES OF PROFESSIONAL CUSTOMIZATION



Saving manpower by sharing drying and unloading functions in one tank.

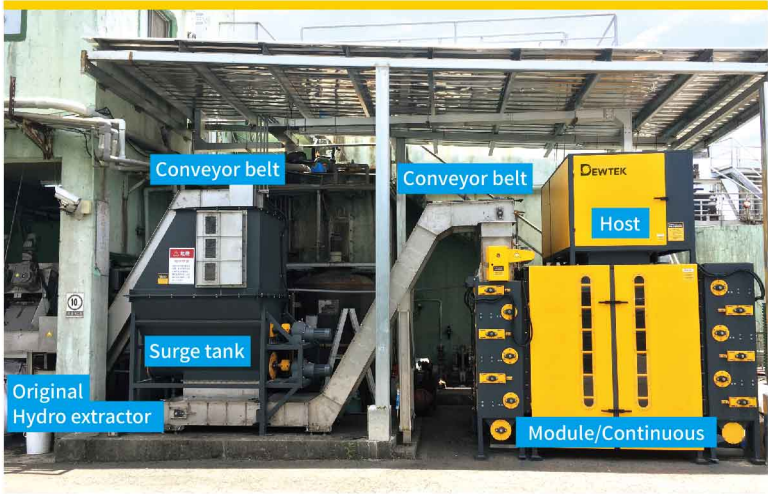


Model	Recommended processing volume (moisture content) kg/day		Weight reduction capability		Energy consumption(host)		Minimum area requirements (sqm)	Single unit	Single drying basket	Dual drying basket	Triple drying basket
	70%→40%	80%→40%	kg/day	kg/hr	kw	kwh/kg					
SD-400	800	600	400	15.0~18.3	7.3~9.1	0.3~0.5	2.74	●	●		
SD-500	1000	750	500	18.8~22.9	12.2~15.2		2.74	●	●		
SD-600	1200	900	600	22.5~27.5	12.2~15.2		2.74	●	●		
SD-800	1600	1200	800	30.0~36.7	13.0~16.2		2.74	●	●		
SD-1000	2000	1500	1000	37.5~45.8	16.0~20.0		4.60	●	●		
SD-1200	2400	1800	1200	45.0~55.0	20.5~25.6		4.60	●	●		
SD-1500	3000	2250	1500	56.3~68.8	21.6~27.0		4.60	●	●		
SD-2000	4000	3000	2000	75.0~91.7	29.0~36.2		4.89	●		●	
SD-2300	4600	3450	2300	86.3~105.4	40.9~51.1		4.89	●		●	
SD-2700	5400	4050	2700	101.3~123.8	44.4~55.5		4.89	●		●	
SD-3200	6400	4800	3200	120.0~146.7	61.3~76.6		4.89	●			●
SD-3500	7000	5250	3500	131.3~160.4	61.3~76.6		4.89	●			●

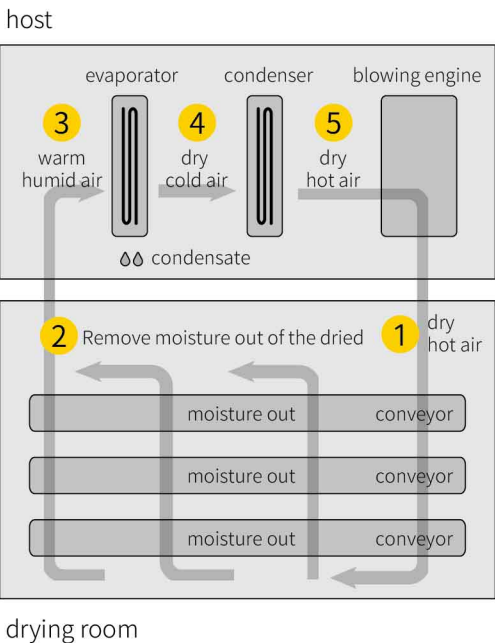
Notes : ❶ Recommended Processing Volume is under the condition of 50~66% sludge weight reduction; the actual capacity is subject to the weight reduction capability in accordance with the sludge's water content. ❷ The default drying time for the system is 22 hours per day. ❸ The standardized operating environment for the whole system is outside air temperature ranged 12~38°C; optional low-temperature auxiliary system is required to operate under 12°C. ❹ With all operation conditions met, the energy consumption for weight reduction is 0.4~0.6kwh for model SD-75~SD-300 and 0.3~0.5kwh/kg for model SD-400 and above. ❺ The conditions for measuring weight loss required energy consumption: ambient temperature at 25~38°C, dehydrated sludge with initial moisture content at 60%~80%. Actual figures may vary with different conditions. ❻ The footprint of your system may vary with models of the drying boxes, and the area occupied is for reference only. ❼ The content of catalogue is subject to change based on the actual requirements and working conditions. The Company reserves the right to make changes in designs.

# CONTINUOUS DRYING EQUIPMENT

Much easier drying by patented energy-saving design in a revolutionary way



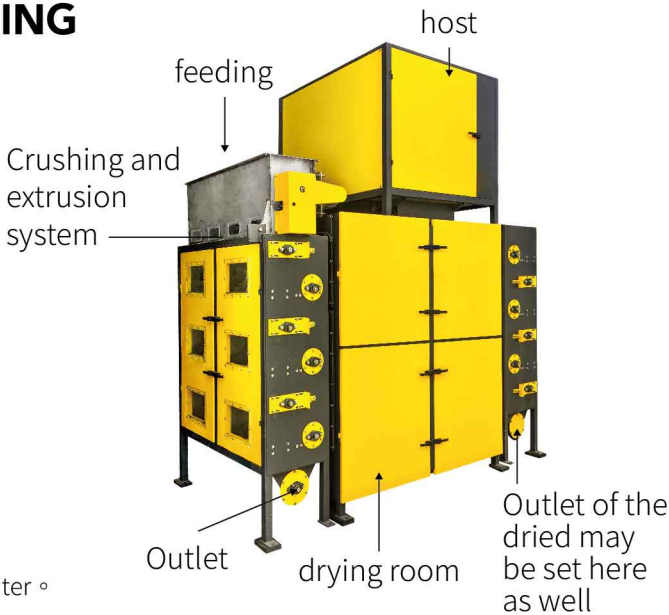
The compact body design eliminates the need to weld the host to the air duct, which, in turn, would shorten the drying stroke and save energy output.



## LARGE DRYING EQUIPMENT DIFFERING FROM THEIR RIVALS IN THE PAST



➔ Cases of cascaded dryers : Linkou water resource recycling center ◦



Model	Recommended processing volume (moisture content) kg/day		Weight reduction capability		Energy consumption(host)		Equipment area (sqm)
	70%→40%	80%→40%	kg/day	kg/hr	kw	kwh/kg	
CTD-300	600	450	300	11.3~13.8	4.2~5.2	0.3~0.5	2.48
CTD-400	800	600	400	15.0~18.3	7.9~9.9		4.50
CTD-600	1200	900	600	22.5~27.5	10.2~12.8		4.50
CTD-800	1600	1200	800	30.0~36.7	12.6~15.8		4.50
CTD-1000	2000	1500	1000	37.5~45.8	14.3~17.9		9.06
CTD-1250	2500	1875	1250	46.9~57.3	20.5~25.6		9.06
CTD-1450	2900	2175	1450	54.4~66.5	23.3~29.1		9.06
CTD-1900	3800	2850	1900	71.3~87.1	29.7~37.1		11.41
CTD-2000	4000	3000	2000	75.0~91.7	37.3~46.6		11.41
CTD-2300	4600	3450	2300	86.3~105.4	37.3~46.6		12.76

Notes : ❶Recommended Processing Volume is under the condition of 50~66% sludge weight reduction; the actual capacity is subject to the weight reduction capability in accordance with the sludge's water content. ❷The default drying time for the system is 24 hours per day. ❸The standardized operating environment for the whole system is outside air temperature ranged 12~38℃; optional low-temperature auxiliary system is required to operate under 12℃. ❹The conditions for measuring weight loss required energy consumption: ambient temperature at 25~38℃, dehydrated sludge with initial moisture content at 60%~80%. Actual figures may vary with different conditions. ❺The loading capacity of the drying module may vary with the volume filling rate of the matter to be dried. Use 0.7~0.8g/cm3 (700~800 kg/m³) for reference. ❻The area occupied is for reference only. ❼The content of catalogue is subject to change based on the actual requirements and working conditions. The Company reserves the right to make changes in designs.





## Concentration and waste reduction

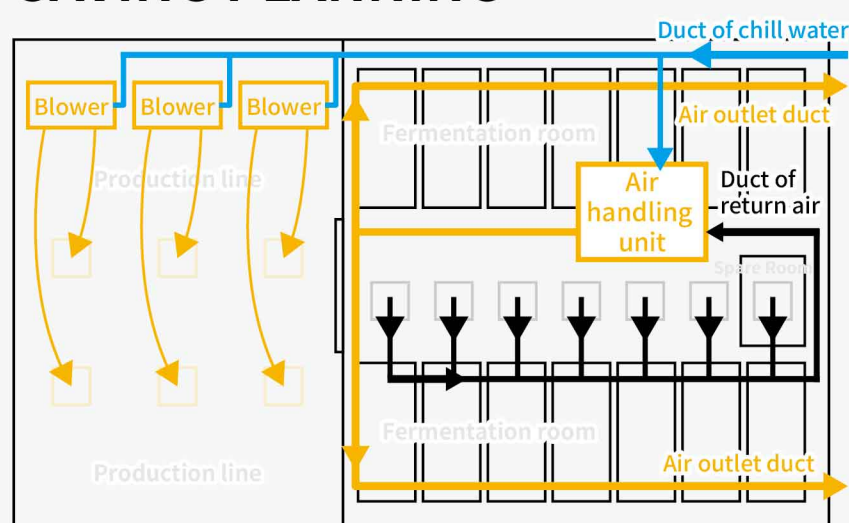
### Concentration case



Waste liquid	concentrated liquid	condensate
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Model		LD-75	LD-100	LD-125	LD-150	LD-200	LD-300	LD-400	LD-500	LD-600
Weight reduction capability	kg/day	75	100	125	150	200	300	400	500	600
	kg/hr	2.5~3.8	3.3~5.0	4.2~6.3	5.0~7.5	6.7~10.0	10.0~15.0	13.3~20.0	16.7~25.0	20.0~30.0
Recommended processing volume	kg/day	113~300	150~400	188~500	225~600	300~800	450~1,200	600~1,600	750~2,000	900~2,400

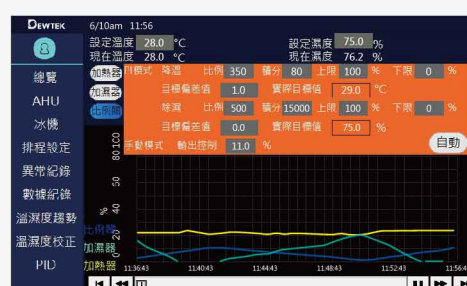
# PRODUCTION LINE ENERGY SAVING PLANNING



➔ Food factory planning case: keep changes in temperature and humidity in the range of  $\pm 1\%$  to greatly reduce the scrap generated by the process.

## Professional capacity control technology

Blessed with a professional air-conditioning background and control design technology, Dewtek has been not only integrating old and new energy management systems but also planning the recycling and applications of waste heat generated in the process.



# WE MAKE EQUIPMENT AIMED AT ENERGY SAVING

## Technical Background

air conditioning technology

Control design technology

Environmental  
engineering background

## Application Technology

Thermal flow and  
drying applications

Software and hardware  
integration technology

Corrosion resistance  
and  
engineering technology

## Product lines

wastewater sludge / liquid concentration

Paint sludge / powder / Component drying

Food drying

Production line energy saving planning

Control integration / Cloud-based energy  
management system

## AMPLE SUCCESS CASES

Dewtek has 100 strong units now in operation. Based on these performances and experiences, Dewtek is rooting its technological capabilities in Taiwan with continuous R&D, innovative technological values, and supply chain integration.



## ENERGY CONSERVATION AND WASTE REDUCTION

Drying equipment with a closed circulation drying system not only effectively saves cost for sludge removal and transportation but also reduces energy consumption, improves energy saving, and exercises carbon reduction.



### Varieties of industrial sludge



### drying dye liquor 、element



### Liquid chemical waste 、food



南亞塑膠  
NAN YA PLASTICS



INDUSTRIAL DEVELOPMENT BUREAU,  
MINISTRY OF ECONOMIC AFFAIRS  
經濟部工業局



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