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 **NIISHI KOGYAKU**

Large size drying equipment series



**H I G H
QUALITY
&
SAFETY**

Asahi Kagaku Co., Ltd. was established in Tokyo's Itabashi Ward in December 1963.
Since then, it has engaged throughout in the research and development of plants and heat treatment. Today it has come to monopolize the majority of the nationwide share in the field of large size drying equipment.
The company has received many inquiries in recent years from Southeast Asia, European countries and the United States, and export contracts are increasing.
After contributing to the development of various enterprises in this way, instead of merely concentrating on the manufacture of products, we intend, as the staff of a "scientific environmental" project, to carry out an expansion in the field.

tsu - ku - su = Endeavoring

尽す。

H I G H
QUALITY
&
SAFETY





H I G H
QUALITY
&
SAFETY

hi-ra-ku=Opening Up

拓く。

Asahi Kagaku believes that
new scientific achievements have their start in their respective unique environments.
Through the sale of various drying equipment and environmental testing equipment,
the company has continued to observe the problems faced by brands in different fields.
In order to think scientifically of the future with heat plant technology,
it is necessary, first of all, to hasten the development and building of a "scientific environment."
Indicator for the 21st Century.
As a pioneer in the building of a "scientific environment,"
we are contributing to the field of heat processing plants.
Please watch the future results.

After mechanical equipment is purchased, there are cases in which its capability is not fully activated and efficiency cannot be raised because of negligence in following the actual running pattern of the production process.

This is an important problem that cannot be ignored at the present time when a large variety of machine types is being developed and manufactured. Asahi Kagaku has given attention to the connection between different mechanical equipment.

A joint with the mechanical equipment that you possess will be arranged smoothly. Although quality control of the products themselves cannot be ignored, it is also believed that the running pattern and support of the joined part are important problems that may affect the fate of a plant.

tsu-na-gu=Joining

繋ぐ。



H I G H
QUALITY
&
SAFETY

Nine series with respective emphasis on each model specialities.
Large size drying equipment supplied by Asahi Kagaku

With the functions required of drying equipment being numerous, the large size equipment that Asahi Kagaku manufactures are supplied in nine series.
 Covering a wide thermal range of 200°C, 300°C and 400°C, the equipment is loaded with various control systems.
 To start with, the characteristic temperature distribution performance and for easy operation and dependable safeness, the manufacturer has the confidence of its customers. Asahi Kagaku, with such a wide range of products, is prepared to fulfill any further requirements that our customers may come to need.



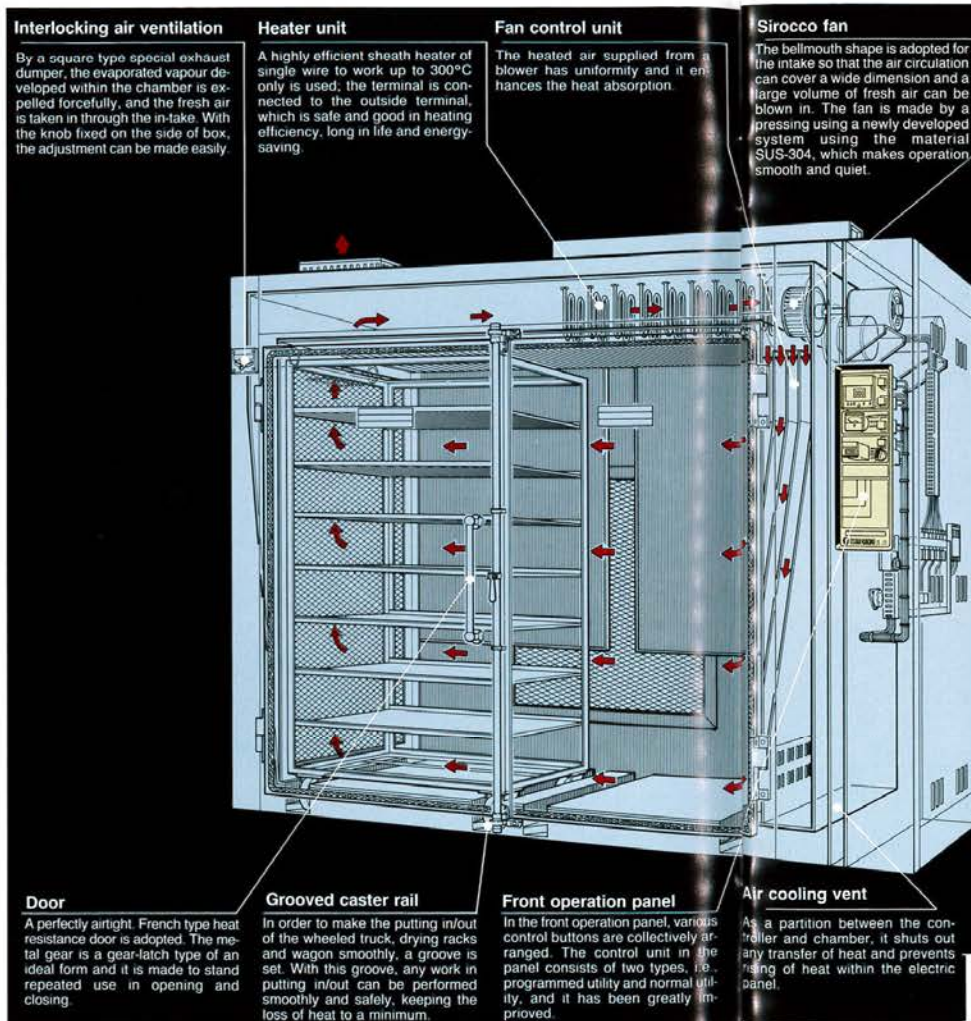
		0°C	200°C	300°C	400°C	●Variation	
● Wheel based hot air circulating drying system	Asset oven					N/P	French door
● Wheel based hot air circulating drying system	Big batchoven					N/P	French door
● Wheel based hot air circulating drying system	Plenty oven					N/P	French door
● Large typehot air circulating drying system	Steam oven					N/P	French door
● Wheel based upright type hot air circulating system	Length oven					N/P	French door
● Large size hot air circulating heating system	Big convection oven					N/P	Single leaf door
● Wheel based large size hot air circulating drying system	Auto pass chamber					N/P	Single leaf door
● Hot air circulating heating system	Free type oven					N/P	French door
● Precision type large size sterilization system	Thermal pass chamber					N/P	Single leaf door

N = Digital automatic temperature adjusting and PID controller
 P = Digital automatic temperature adjusting meter with an attached programmed controller.

"The best" from our technological staff in Asahi Kagaku

技

WAZA



Products in series to meet the needs of the present age.

To the uncompromising products of collective achievements made in the system of large size industrial drying equipments by the ability of our engineers, a series of high temperature ovens have been added, which has made our line of products available for various usages as well as with enlarged internal dimensions. A large type drying system made in 11 sizes is an outstanding series of products, and we are confident that our products can meet almost any requirement that may come up with our customers.

Can fulfill many purposes.

A large size wheeled type drying system which, by use of wheels has alleviated much of the work related with putting in/out of large sized test materials and saving time required in the work. It makes continual operation workable and speedy, and has enhanced the efficiency. Thus, it helps with an amazing increase in productivity. Added to the abundant stock of standard attachments, those numerous optional items, have made almost every need fulfilled.

High technology leads the future.

The large size drying equipment series has been worked on the theme "To aim for the 21st Century", and, with all of Asahi's high technology concentrated, has developed an all-purpose large size wheeled drying system.

This system gives a renewed image in any line such as, drying temperature effectiveness, safeness, work efficiency, space-saving and running cost-down, and is a perfected all-purpose large size wheeled drying system.

Wide range of variation

The large size drying system manufactured by Asahi Kagaku is used in wide range of industrial production, including heated air drying, for baking process of metal, curing of semi-conductors, aging test, and additionally, heat sterilization drying, preserving, dust-free hot air drying in metallurgical industry, semi-conductor industry, pharmaceutical industry, medical organizations and research laboratories. For such a drying system, distribution of the temperature is the most important function. By studying seriously the distribution of heat, an epochal large sized drying system series having a proficiency way beyond general knowledge has been developed.

粹

IKI

HIGH
QUALITY
&
SAFETY

300°C
MAX.

Wheeled heated air circulation type drying system

AL

N	10
P	15
	20

 Series

An ideal industrial drying system

AL series is an all-purpose large size drying system, which, added to its high efficiency in heat drying, is made available in a wheeled type, combined with a shelf type. With this combination, the system can be used by customers, subject to their needs. The system is a never before known type in large size drying requirements.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

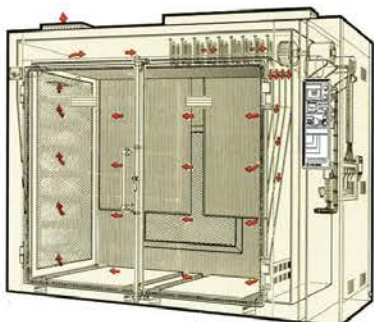
Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color, Two-tone colors blue and ivory



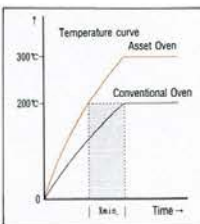
Program control/PID digital fixed control of high efficiency

On the standard control panel for Asset Oven series, two types of heat control system, programmed step control and PID digital control, are available for your choice. Both of them are the system of micro computerized, PID control, high efficiency, automatic digital temperature controller.



With increased power for speeding up

This is the first system of 300°C type that had taken in 300°C as the standard temperature zone, as well as it is designed and manufactured with the specification for this temperature zone. With this system, any temperature, more or less, of 200°C is available, and its temperature rising is greatly expedited compared to the conventional product; and, with speeding-up of the time for drying, the productivity is greatly advanced.



Specification			
	AL-10	AL-15	AL-20
Interior measurement	W1000×D1000×H1500	W1500×D1000×H1500	W1500×D1000×H1500
Interior dimension	1.5 m ³	2.25 m ³	3.0 m ³
Exterior measurement	W1770×D1250×H1960	W2270×D1250×H1960	W2770×D1250×H1960
Fan and motor	Stainless Sirocco fan, 205ø, 0.75KW., 2 ea.		
Fan driving	Direct connection		
Ventilation	135ø, 1 set		
Power source	* The source of electric power and voltage for 3P are different by each country.		
Heater capacity	18KW	21KW	24KW
Weight	800kg	1,000kg	1,200kg

* Measurement unit: mm

AL Specialized wheeled D Series

Easy for taking in or out by wheeled system

AL specialized wheeled LD series became handy by the addition of the wheel system for transferring the work from the plant to the drying equipment, and, by which arrangement, the process has been greatly expedited. For any product of heavy weight and needing repeated drying, this type is, indeed, indispensable.

Specialized SUS-304 wheeled truck



With as many as 24 holes arranged for the shelf holder with a pitch of 50mm (standard number of shelf holder being 8 sets), any working size can be arranged simply by loosening the screws to change the pitch for shelves. The truck measures only 1535mm in its entire height, and it can be moved smoothly by means of its free casters.



AL Specialized cushion C Series

Heating of any organic solvents can be done safely.

This AL specialized C series is best suited for working to heat and dry any material containing organic solvents, etc. The heat source is a sheath heater having an exterior terminal made of SUS-304 stainless steel, which prevents any accident because of its safeness designed by Asahi Kagaku. Moreover, preparing for any unexpected accident, an explosion prevention cushion door is attached on the back to assure the safety of work hands.

Explosion prevention cushion: *CU 600: 600×600mm.

Specialized exhaust blower



When vapor gas in large quantity is to be disposed of, the use of a safer specialized exhaust blower is recommended. This blower can be installed together with the standard attachments such as, timer, and programmed event (optional).



300°C
MAX.

Wheeled heated air circulation type drying system

AT N 15
P 20 Series

All-purpose large size space efficient drying system

AT series is one of the large size drying systems that has an extended height, 2,000mm, and thus, increasing the available space, the system has improved efficiency for processing by approximately 1.3 folds. This series can match perfectly with heating and drying of any large size work.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory



Putting in/out of work-shelf can be speedily performed! Guide rail/flat bottom.

The variation in height between the double bottom panel and the top bottom panel is no more than 2—3mm, which makes the bottom almost flat. In the bottom grooves, a guide rail is fixed and the wheeled truck can easily and with no bouncing be led in or drawn out smoothly.



	Specification	
	AT-15	AT-20
Interior measurement	W1500 × D1000 × H2000	W2000 × D1000 × H2000
Interior dimension	3.0m ³	4.0m ³
Exterior measurement	W2270 × D1250 × H2480	W2270 × D1250 × H2480
Fan and motor	Stainless Sirocco fan, 205ø. 0.75Kw. 2 ea.	
Fan driving	Direct connection	
Ventilation	135ø, 1 set	
Power source	* The source of electric power and voltage for 3P are different by each country.	
Heater capacity	24KW	30KW
Weight	1,300kg	1,500kg

* Measurement unit: mm

AT Specialized truck
D Series

A large size truck handling much volume at one time

AT specialized truck, D series, can handle much of the volume in one time in a narrow space with a single cycle of work, and is designed as large size for the use of any elongated material and for heat preservation. It saves much of the space and by adoption of a large size truck, the heating system fits into a high efficiency production system.

Specialized SUS-304 truck



Thirty shelf holders are arranged at a pitch of 50mm (standard numbers of holder being 10), and because of the numerous holders, any work-size can be fitted in simply by loosening the screws and changing the pitch of holders. The truck measures 1,840mm in its overall height and it handles much material at one time. The truck is easily moved on its three castors.

AT Specialized cushion
C Series

Being programmed, the process of heating is safe

ATP type AT specialized cushion, C series, can be controlled by program. The programmed step control can be easily operated by anyone and any process where organic solvents are used can be automated, and yet, it is processed safely for heating, and the efficiency of work control can be enhanced. Explosion prevention cushion, CU6/8: 600 × 800mm, is set in the back.

Explosion prevention cushion (vent)



The accidents that happen most frequently in the heat drying system is in drying process with heat. This attachment is a necessity in work where much vapor gas is exuded.



OPTIONAL PARTS

P panel (programmed control) and F panel (PID control) electronic control panels

P Panel

Energy saving by automated continuous operation.

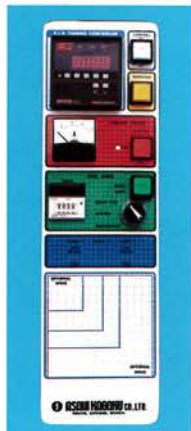
Responds in all respect to the needs required in a drying system.



F Panel

For an assured control with digital PID.

The latest functions are provided extensively.

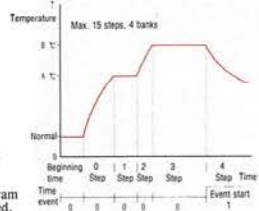


Standard attachments



Digital programmed temperature display adjuster

A. Programming is easily done by anybody. Any desired pattern can be started or repeated automatically by depressing the keys on the panel.
B. Automatic tuning for the correct temperature control. With an automated tuning system, PID automatically indicates and controls the best conditions.



Programmed pattern chart example
A multiple-purpose program can be arranged.

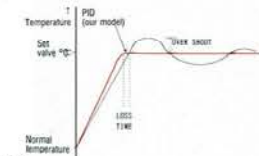


Mode selector

Pre-set starting, stop operation, buzzer warning and any other modes can be switched by depressing the key.



Digital type PID program temperature display adjuster
With a micro computer loaded, the digital display is shown clearly and legibly, and a correct temperature control can be made with an ease. In its control [P] proportion, [I] integration, and [D] differentiation, are performed with no overshooting nor with any hunting, but by perfectly controlling the temperature.

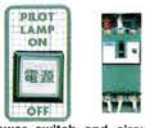


Temperature curve
No time loss because of PID controller.



Overheat prevention device

When the temperature rises beyond the set range, the heater circuit gets closed and both work and equipment are protected.



Power switch and circuit breaker

Inside the inspection door, this device works at once to break the power supply when any electric leakage is noted and safety is maintained.



Digital Quartz timer
1 min. ~ 99 hrs. 59 min.



SSR (no contact) relay
(Standard attachment in PS and NS models)
SSR relay is attached to control the heater for prevention of sparking and noise which make it noise-free, safe and longer in life.



Door open/close, fan stop/start
When the door is opened or closed, the fan automatically stops or starts. With this device, any work, without being followed by blowing out of hot air, can be done safely.



Abnormal signal warning buzzer

The flashing lamp and buzzer will warn if any abnormal condition have occurred.



Circuit protector and no fuse breaker

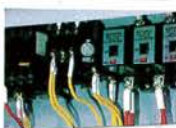
At any time when any overload to the operation circuit and the heating circuit happens, it will break the circuit instantly.



Ampere meter
It displays the ampere of load heater. It controls accurately the heat source.



Inspection door/stop limit



Motor protection circuit
It will break the circuit and protects the motor when the motor's circuit breaks down.

Optional attachments

Temperature range: 0 ~ 300°C
Temperature measuring device: CA thermocouple
Measuring point: 6 points
Chart width: 100mm



Temperature recorder/recording sheet

For the control of temperature and data preservation, this is an indispensable attachment.



Temperature sensor
For measuring the wide distribution of temperature



Forced exhaust blower

To be used with the type of work where organic solvents are used or vapor gas is to be emitted.



Automatic interlocking dumper for intake/exhaust
For controlling drop/rise in the temperature.



Gas warning system

To be used when working with organic solvents and inflammable gas emitting material.



Hot air generator for exterior air intake
This system enables the temperature control to work promptly and efficiently.



Replacing system of non-oxygen atmosphere

To begin with an air-tight condition to allow heat drying process and temperature testing in any inactive gaseous atmosphere such as carbonic acid gas, etc., a gas flow meter and flow control valve are provided so that the post super low humidity atmosphere can be controlled.



Heater disconnection warning system
Any open phase and disconnection in the heater circuit in operation is instantly indicated.

OPTIONAL PARTS

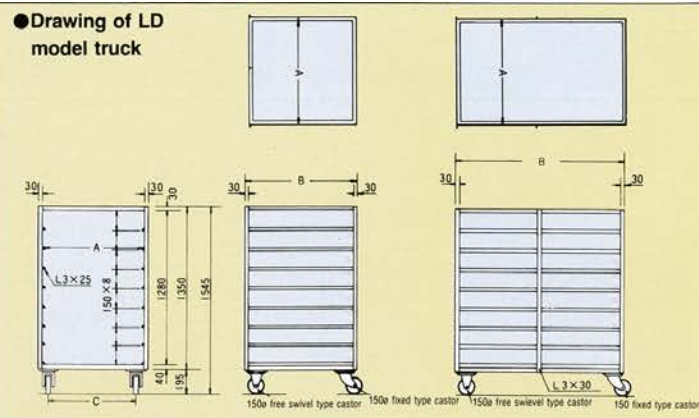
Drawing of Asset oven specialized truck measurements

LD height: 1545mm/TD height: 1915mm

Type	A Front	B Depth	C Axle lead
LD10	930	950	740
LD15	680	950	490
LD15B	1430	950	1240
LD20B	1940	950	1740
TD10	950	950	740
TD15	700	950	490
TD15B	1450	950	1240
TD20B	1950	950	1740

* Measurement unit: mm

●Drawing of LD model truck



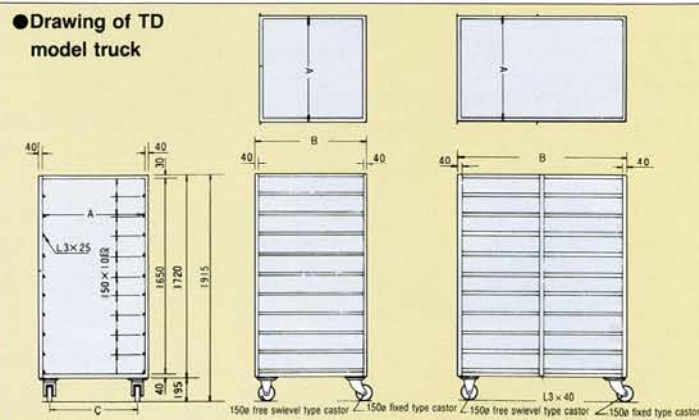
Drawing of Big batch/Plenty oven specialized truck measurements

LD height: 1545mm/TD height: 1915mm

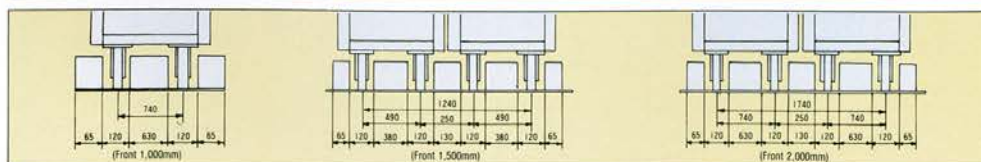
Type	A Front	B Depth	C Axle lead
LD1515	680	1450	490
LD1015	930	1450	740
LD1020	930	1950	740
LD1515B	1430	1450	1240
LD2015B	1930	1450	1740
LD2020B	1930	1950	1740
TD1515	700	1450	490
TD1015	950	1450	740
TD1020	950	1950	740
TD1515B	1450	1450	1240
TD2015B	1950	1450	1740
TD2020B	1950	1950	1740

* Measurement unit: mm

●Drawing of TD model truck

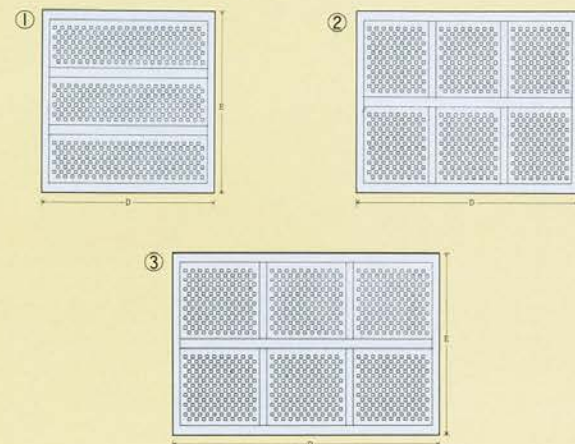


Drawing of wheel groove measurements



* Measurements are indicated in mm.

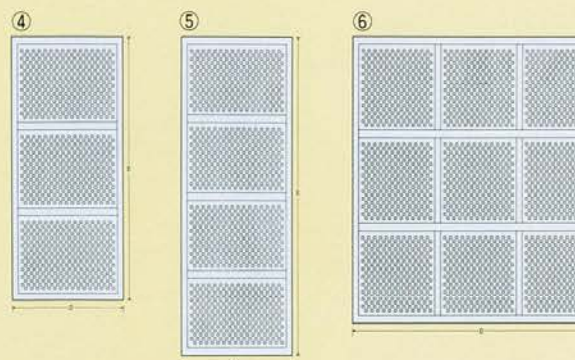
Drawing of Asset oven specialized truck measurements



Type	D Front	E Depth	Fig. No.
10KG*50KGD10	855	905	①
10KG*50KGD15	605	905	①
50KGD15B	1355	905	②
50KGD20B	1855	905	③

* Measurement unit: mm

Drawing of Big batch/Plenty oven specialized truck measurements



Type	D Front	E Depth	Fig. No.
50KGD1515	605	1405	④
50KGD1015	855	1405	④
50KGD1020	855	1905	⑤
50KGD1515B	1355	1405	⑥
50KGD2015B	1855	1405	⑥
50KGD2020B	1855	1905	⑥

* Material: ALL stainless SUS-304/
Measurement unit: mm

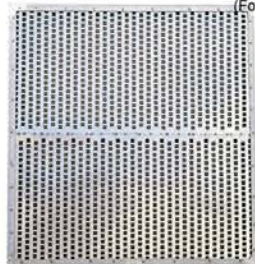
OPTIONAL PARTS

Optional parts

(For light-weight work)



(For heavy-weight work)



Net for drawer system

Model	10KG-50KG100	50KG150	50KG200	Model	50KG150/15	50KG200/15	50KG200/20
Measurements	W 985 × D 970	W1985 × D 970	W1985 × D 970	Measurements	W1485 × D1470	W1985 × D1470	W1985 × D1970
Material	Stainless	Stainless	Stainless	Material	Stainless	Stainless	Stainless



Shelf holder

Model	uk100	UK150	UK200	Model	BT100	BT150	BT200
Measurement	D 990	D1490	D1990	Measurement	W 985 × D 970	W1485 × D 970	W1985 × D 970
Material	Stainless	Stainless	Stainless	Model	BT150/15	BT200/15	BT200/20
				Measurement	W1485 × D1470	W1985 × D1470	W1985 × D1970

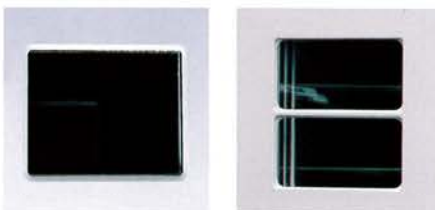
Stainless steel tray: Depth 40mm/80mm (F)



Terminal hole with Silicon stopper

Model	SI/CN-50	SI/CN-38	SI/CN-25		Heat resistant front window	Heat resistant front window	
Terminal hole (Bore)	50	38	25	Measurement	W 210 × H 170	W 255 × H 235	
Silicon stopper ø	Top: 55/bottom: 48	Top: 41/bottom: 36	Top: 28/bottom: 23	Heat resistance	MAX. 200°C	MAX. 400°C	

Inspection window



The budding of work will never be brought to an end.
Manufacturing of precise products is very much alive at Asahi Kagaku.



BIGBATCH OVEN Series

200°C
MAX.

Wheeled heated air circulation type drying system

BL N 1515
P 2015
2020 Series

Large size industrial drying system

BL series is an all purpose large size drying system with which the effective use of its depth will save much of its lateral open space. By an establishment of a production flow, a variation can be developed and any choice of the equipment to meet the worksize is made feasible.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

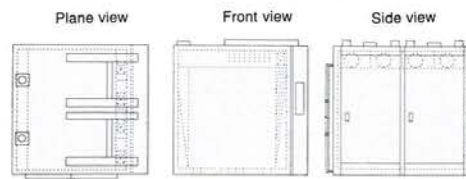
Newly developed long life sheath heater

The power source is a newly developed safe exterior terminal sheath heater which is provided in every model of the series. On the interior top covering, an inspection door is fixed and it is made easy for maintenance and regular inspection.



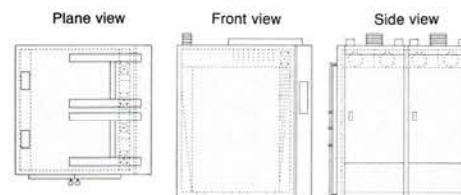
Specialized SUS-304 punched net shelf

The stainless steel specialized punched net shelves constructed of a light weight mesh, 1mmø, longitudinal wire, punched with 10mm opening, 10Kg., 10Kg., and an dan angled frame punched with 10mm opening for heavy weight 50Kg., 50Kg., in all, 4 types are available.



Specification			
	BL-1515	BL-2015	BL-2020
Interior measurement	W1500 × D1500 × H1500	W2000 × D1500 × H1500	W2000 × D2000 × H1500
Interior dimension	3.38m ³	4.45m ³	6m ³
Exterior measurement	W2270 × D1250 × H1960	W2270 × D1750 × H1960	W2770 × D2250 × H1960
Fan	Stainless Sirocco fan, 205ø		
Motor	0.75KW, 3 sets	0.75KW, 3 sets	0.75KW, 4 sets
Fan driving	Direct connection		
Ventilation	135ø, 2 sets	135ø, 2 sets	135ø, 2 sets
Power source	* The source of electric power and voltage for 3P are different by each country.		
Heater capacity	21KW	27KW	30KW
Weight	1,200kg	1,350kg	1,500kg

* Measurement unit: mm



Specification			
	BT-1515	BT-2015	BT-2020
Interior measurement	W1500 × D1500 × H2000	W2000 × D1500 × H2000	W2000 × D2000 × H2000
Interior dimension	4.5 m ³	6.0 m ³	8.0 m ³
Exterior measurement	W2270 × D1750 × H2480	W2770 × D1750 × H2480	W2770 × D2250 × H2480
Fan	Stainless Sirocco fan, 205ø		
Motor	0.75KW, 3 sets	0.75KW, 3 sets	0.75KW, 4 sets
Fan driving	With belt		
Ventilation	135ø, 2 sets	135ø, 2 sets	135ø, 2 sets
Power source	* The source of electric power and voltage for 3P are different by each country.		
Heater capacity	27KW	33KW	36KW
Weight	1,400kg	1,600kg	1,900kg

※寸法表示はmmです。

BT N 1515
P 2015
2020 Series

All purpose large size industrial drying system

BT series is the largest size drying equipment in our range of products. It is suitable for work of large quantity and of any large sized testing material for drying and heat treatment. Much consideration is given to the running cost, productivity, and safety and it is made with excellent design and is strongly built.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

Interlocking intake/exhaust ventilation system

In the past when working with such large sized systems, work hands had to climb up a step for adjusting intake and exhaust of air. With the latest model, the adjustment system has been made interlocking and even when the system is in operation, such an adjustment can be made by the front attachment.



Stainless steel Sirocco fan



With a Sirocco fan, measuring ø 205 × L 130mm, and of a large diameter, made of SUS-304 stainless steel, if circulates the hot air from corner to corner which facilitates an even temperature distribution.

300°C
MAX.

Wheeled heated air circulation type drying system

PL **N 1515**
P 2015
2020 Series

The first 300°C industrial drying system

As a large size drying system, this series is an epochal 300°C type heat processing oven. Where drying is needed to be repeatedly done with a small volume at a time, it now can be done with a large volume, and in a single process. For a production oven, it is made and finished strongly and upgraded. Designed to ensure a long working life.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

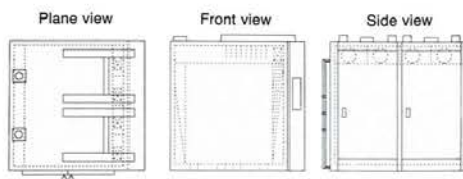
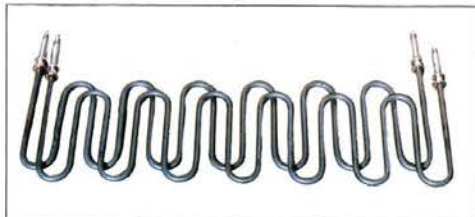
Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32e large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color, Two-tone colors blue and ivory



A safe design, Newly developed heat source

For the heat source, a special designed sheath heater is attached. With its front panel wattage set, external terminal and dually insulated, the insulation has been improved, realizing an astounding long life. By use of a unit system, its replacement is made easy.



Specification			
	PL-1515	PL-2015	PL-2020
Interior measurement	W1500 × D1500 × H1500	W2000 × D1500 × H1500	W2000 × D2000 × H1500
Interior dimension	3.38 m ³	4.45 m ³	6 m ³
Exterior measurement	W2270 × D1250 × H1960	W2770 × D1750 × H1960	W2270 × D2250 × H1960
Fan	Stainless Sirocco fan, 205e		
Motor	0.75KW, 3 sets	0.75KW, 3 sets	0.75KW, 4 sets
Fan driving	Direct connection		
Ventilation	135e, 2 sets	135e, 2 sets	135e, 2 sets
Power source	*The source of electric power and voltage for 3P are different by each country.		
Heater capacity	24KW	30KW	36KW
Weight	1,300kg	1,450kg	1,600kg

* Measurement unit: mm

PT **N 1515**
P 2015
2020 Series

Large size 300°C type industrial drying system

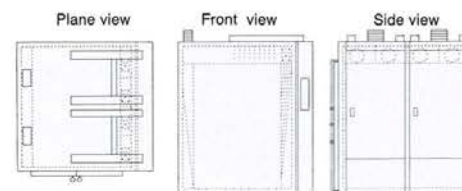
This is an epochal 300°C type large size drying system; with an overall effective height of 2,000mm. Three interior dimensions ranging from 4.5m³ — 8m³ are available with the standard type which can be selected to meet the customers' production plan.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32e large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color, Two-tone colors blue and ivory



Specification			
	PT-1515	PT-2015	PT-2020
Interior measurement	W1500 × D1500 × H2000	W2000 × D1500 × H2000	W2000 × D2000 × H2000
Interior dimension	4.5 m ³	6.0 m ³	8.0 m ³
Exterior measurement	W2270 × D1750 × H2480	W2770 × D1750 × H2480	W2770 × D2250 × H2480
Fan	Stainless Sirocco fan, 205e		
Motor	0.75KW, 3 sets	0.75KW, 3 sets	0.75KW, 4 sets
Fan driving	With belt		
Ventilation	135e, 2 sets	135e, 2 sets	135e, 2 sets
Power source	*The source of electric power and voltage for 3P are different by each country.		
Heater capacity	30KW	36KW	42KW
Weight	1,500kg	1,700kg	2,000kg

* Measurement unit: mm

Work of any large volume can be uniformly heat processed.

Such commonly happening time loss in the heat rising and unequal distribution as experienced with all the large size systems in the past is now overcome and eliminated by the new technology of Asahi Kagaku. Based on their considerable work and experiences, an incomparable efficiency can be realized.



Large size gear latch



Ideally designed for easy use with a reliable mechanism. With this system, doors can be closed tightly without failure, preventing any of the heat from escaping. The system uses a stainless shaft of large diameter is ø32mm.

200°C
MAX.

Large size heated air circulating type steam drying system

SL

N	10
P	15
	20

 Series

Steaming type large size industrial drying system

SL series, with an all-purpose large size drying system as its base, steam is used as its heating source. With the technology successfully achieved with our Asset oven, this is a combination of wheeled and net shelf inserting model which can be used in either way depending on the nature of process. (A combination with electric heater can also be used.)

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

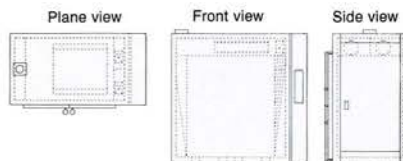
- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirococo fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

Heat exchanger system of excellent efficiency

For the heat source, SUS-304 stainless steel fin heat exchanger is adopted which has a high heat exchanging efficiency, free from any corrosion and long in its life.



Stainless steel: Aero-fin heater



Specification			
	SL-10	SL-15	SL-20
Interior measurement	W1000×D1000×H1500	W1500×D1000×H1500	W2000×D1000×H1500
Interior dimension	1.5 m ³	2.25 m ³	3.0 m ³
Exterior measurement	W1700×D1350×H1960	W2270×D1350×H1960	W2770×D1350×H1960
Fan	Stainless Sirococo fan, 205ø		
Motor	0.75KW, 2 sets	0.75KW, 2 sets	0.75KW, 2 sets
Fan driving	Direct connection		
Ventilation	135ø, 1 set		
Power source	*The source of electric power and voltage for 3P are different by each country.		
Heater exchanger	Stainless,		
Weight	1,250kg	1,550kg	1,850kg

* Measurement unit: mm



ST

N	15
P	20

 Series

Steaming type large size industrial drying system

ST series is an all-purpose large size drying system, measuring 2,000mm for its overall height and by utilizing the open space, it is a space saving type.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirococo fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

A newly developed double leaf door

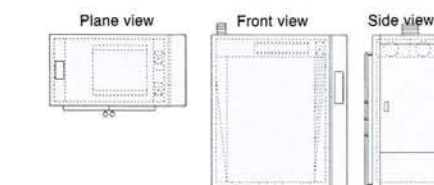


With a large size drying system, the opening/closing of doors are so frequently repeated that for working hands, the working environment gets spoiled and it is hard work for the workman. To prevent any danger of heat getting transferred to the surface and its adjacent part on the door, loss of heat, and the odors that are emitted during heating and drying processes, the door should be made openable smoothly and with little energy. The double leaf door is most ideal because it closes tightly. Asahi Kagaku became aware of this matter much sooner than others, and has studied the problem cautiously, and finally developed a door for drying system equipment which is safe and effective in making the working environment good.

Heat flow adjusting board to secure heating efficiency



The heated air is needed to be circulated in conformity with the form of work so as not to cause any loss in heating and drying and an attachment to assist the stabilization of flow has been added.



Specification		
	ST-15	ST-20
Interior measurement	W1500×D1000×H2000	W2000×D1000×H2000
Interior dimension	3.0 m ³	4.0 m ³
Exterior measurement	W2360×D1350×H2480	W2860×D1350×H2480
Fan	Stainless Sirococo fan, 205ø	
Motor	0.75KW, 2 sets	0.75KW, 2 sets
Fan driving	With belt	
Ventilation	135ø, 1 set	
Power source	*The source of electric power and voltage for 3P are different by each country.	
Heater exchanger	Stainless,	
Weight	1,500kg	1,800kg

* Measurement unit: mm

LENGTH OVEN Series

200°C
MAX.

Hot air circulation type upright wheeled drying system

LL N 1510
P 1520
1530 Series

A large type industrial drying system of convection type

LL series upright drying system is a large size system of heated air to circulate from top to bottom. This is for specialized drying of work such as, tape and corned formed materials. As a wheeled model or in combination with a net shelf, this series can be used.

Standard control attachments

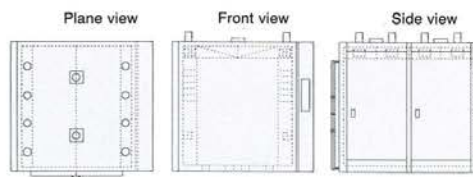
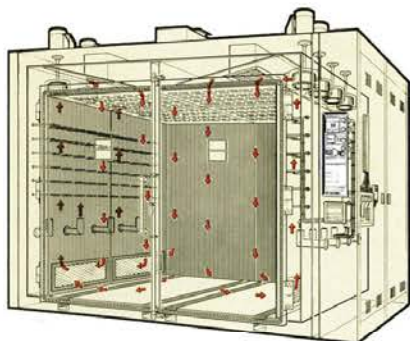
- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

High efficiency with an unequalled drying effect

The circulator in the length oven series has a set of fans (right and left) which circulate the air forcefully, and it is good therefore, in its drying efficiency. Two types of temperature control, programmed step control/fixed control, can be selected. Each of the control systems consists of computerized PID controls of high efficiency digital automatic thermal display adjuster.



Specification			
	LL-1510	LL-1520	LL-1530
Interior measurement	W1500×D1000×H1500	W1500×D2000×H1500	W1500×D3000×H1500
Interior dimension	1.5m ³	4.5m ³	6.75m ³
Exterior measurement	W1980×D1250×H1850	W2480×D2250×H1850	W2480×D3250×H1850
Fan	178ø	Stainless Sirocco fan 205ø	
Motor	0.4KW, 4 sets	0.75KW, 8 sets	0.75KW, 12 sets
Fan driving	Direct connection		
Ventilation			
Power source	*The source of electric power and voltage for 3P are different by each country.		
Heater capacities	18KW	30KW	42KW
Weight	800kg	1,300kg	1,600kg

* Measurement unit: mm

LT N 1515
P 1520
1530 Series

Drying system with productivity and safety priority designed

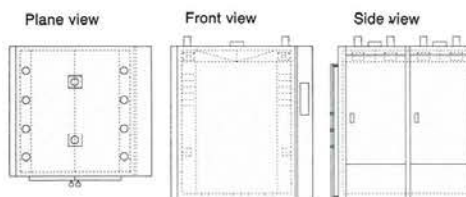
LT series has the largest interior dimension among the Asahi Kagaku's large size drying systems. This type fits in well for drying and heating of materials of any large volume and sizes. It is designed with the priority given to its running cost saving, workability and safety, and has been purposely designed.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

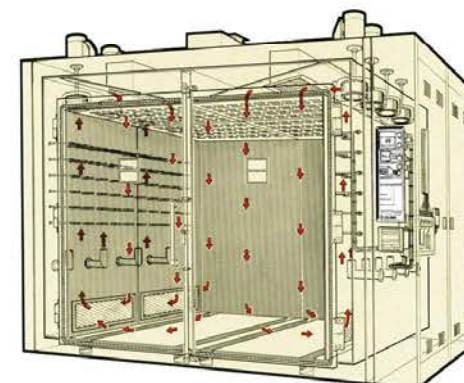


Specification			
	LT-1515	LT-1520	LT-1530
Interior measurement	W1500×D1500×H2000	W1500×D2000×H2000	W1500×D3000×H2000
Interior dimension	4.5m ³	6.0m ³	9.0m ³
Exterior measurement	W2660×D1750×H2480	W2660×D2250×H2480	W2660×D3250×H2480
Fan	Stainless Sirocco fan, 205ø		
Motor	0.75KW, 4 sets	0.75KW, 8 sets	0.75KW, 12 sets
Fan driving	Direct connection		
Ventilation	300—100m, 2 sets	300—100m, 2 sets	300—100mm, 3 sets
Power source	*The source of electric power and voltage for 3P are different by each country.		
Heater capacity	27KW	33KW	42KW
Weight	1,600kg	1,600kg	2,000kg

* Measurement unit: mm

Best fitted for heat drying of elongated form material

This system has been developed especially for drying of any material that has elongated measurements.



BIG CONVECTION Series

400°C
MAX.

A large type heated air circulating drying system

BC S N 10
L P 15 Series

A large size 400°C class heating system

BC series, the first standardized system of this class of 400°C range, has been perfected as a large scale heating system for high temperature heating, and endurance life testing equipment of voluminous material to be processed with uniform treatment under severe conditions.

Standard control attachments

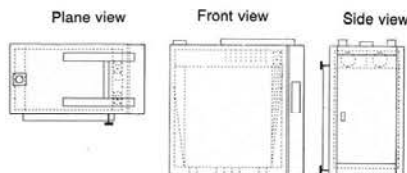
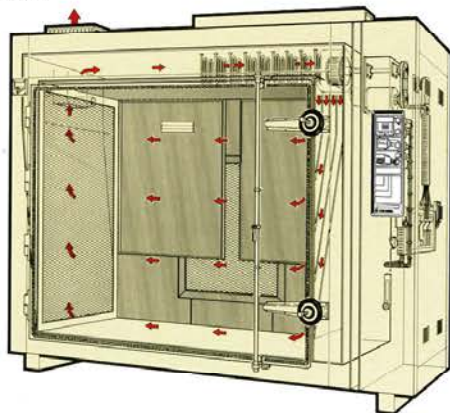
- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory

BC series is proud of its high quality and safeness

This construction takes into account its influence on the environment, when the equipment needs to be operated continuously with high temperature. This heating system is excellently insulated and efficient, and is, therefore, energy saving.



Specification			
	BCS-10	BCL-10	BCL-15
Interior measurement	W1000×D1000×H1200	W1000×D1000×H1500	W1500×D1000×H1500
Interior dimension	1.2 m ³	1.5 m ³	2.25 m ³
Exterior measurement	W1900×D1350×H1750	W1900×D1350×H2050	W2400×D1350×H2050
Fan & motor	Stainless Sirocco fan, 205ø, 0.75KW, 2 sets		
Fan driving	With belt		
Door	Single leaf type		
Ventilation	135ø, 1 set		
Power source	* The source of electric power and voltage for 3P are different by each country.		
Heater capacities	27KW	36KW	42KW
Weight	1,200kg	1,500kg	1,800kg

* Measurement unit: mm

AUTO-PASS CHAMBER Series

300°C
MAX.

A large size wheeled type heated air circulation drying system

Series

A large size wheeled type heated air circulation drying system

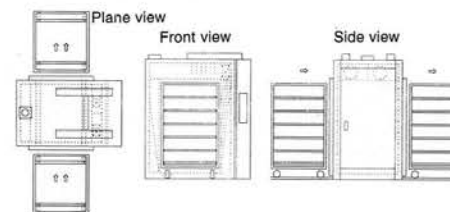
APL series, a wheeled automatic continuous drying system, based on the all-purpose large size drying system. Opening/closing of the door and inserting, drying, extracting and cooling of work and working truck are controlled automatically. Space considerate design and its low cost, make this new product higher in its productivity than any other models.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0—300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/resume device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32ø large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color. Two-tone colors blue and ivory



Specification			
	APL-10	APL-15	APL-1020
Heat trucks	For 1 truck	For 2 trucks	For 2 trucks
Interior measurement	W1000×D1000×H1500	W1500×D1000×H1500	W1000×D2000×H1500
Interior dimension	1.5 m ³	2.25 m ³	3.00 m ³
Exterior measurement	W1900×D3350×H1700	W1900×D3350×H2000	W2400×D4350×H2000
Fan & motor	Stainless Sirocco fan, 205ø, 0.75KW, 2 sets		4 sets
Fan driving	Direct connection		
Ventilation	135ø, 2 sets		135ø, 1 set
Power source	* The source of electric power and voltage for 3P are different by each country.		
Heater capacities	18KW	21KW	36KW
Weight	1,200kg	1,500kg	1,800kg
Work truck	3	6	6
Exterior cooling	Option	Option	Option

* Measurement unit: mm

Easily controllable auto-pass chamber specification

- ① Drying time, temperature is automatically set.
- ② A truck is set in pass-line.
- ③ Automatic door is set on the inserting side.
- ④ A truck moves and locates automatically in the chamber
- ⑤ Heat drying process starts (automatic dumper opens and exhaust blower starts).
- ⑥ The set temperature is reached. (Automatic dumper closes and exhaust blower stops).
- ⑦ Heat-drying time of the work (Truck can be set on the pass line or can be set for any shorter time use).
- ⑧ Completion of the heat drying of work. (Heater and circular fan stops).
- ⑨ Door on the side of inserting/drawing out opens automatically.
- ⑩ Work truck in the chamber moves out automatically. (starting concurrently; when no truck is on the pass line, it stays waiting).
- ⑪ Automatically drawing out the work and starting its cooling (start concurrently; when no truck is in the chamber, it stays waiting).
- ⑫ Cooling of the work truck completed and buzzer is on. Work is finished.

* stands for manual work only. Others are worked automatically.

FREE TYPE OVEN Series

200°C
MAX.

Heated air circulation type drying system

FT L N
T P Series

Assembled type super large size heat drying system

FT series is a system completed by Asahi Kagaku as an assembled type super large size heat drying system to meet the requirements. As the manufacturer of large size heat drying systems, Asahi displays an incomparable ability for efficiency and safety based on its abundant production experiences.

Standard control attachments

- PID digital type automatic temperature display adjuster
- CA sheath sensor
- Automatic temperature display adjuster
- Amperemeter
- Overheat prevention device 0~300°C
- Flicker lamp with a warning buzzer
- Digital Quartz timer, 1 min.—99 hrs. 59 min.
- Power switch and circuit breaker, push button switch illuminates when pushed
- Circuit breaker, Circuit protector, motor thermal relay
- Door open/close fan stop/restart device

Standard attachments

- Chamber interior, stainless SUS-304
- Chamber exterior, heating part SUS-304 (other bonded parts, steel)
- Air flow adjuster, Upper-center-bottom
- Packing, formed Silicon packing
- Heat insulating material, blanket
- Door metal-clutch, 32e large size gear-latch
- Fan, SUS-304, Sirocco fan
- Filter, SUS-304, 100 mesh
- Painting, baked painting
- Color, Two-tone colors blue and ivory

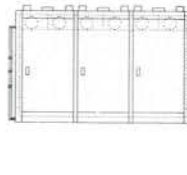
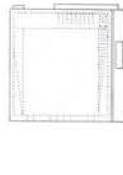
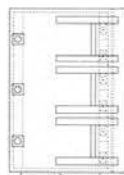


FTT type

Plane view

Front view

Side view



Specification

	FTL	FTL	FTL	FTT	FTT	FTT
Interior measurement	W1500 × D3000 × H1500	W2000 × D3000 × H1500	W3000 × D3000 × H1500	W2000 × D3000 × H2000	W2000 × D4000 × H2000	W3000 × D6000 × H2000
Interior capacity	6.75m ³	9.0m ³	13.5m ³	12.0m ³	16.0m ³	32.0m ³
Exterior measurement	W2180 × D3200 × H1950	W2680 × D3200 × H1950	W3680 × D3200 × H1950	W2680 × D3200 × H2450	W2680 × D4200 × H2450	W3680 × D6200 × H2450
Fan and motor	Sirocco fan, 6 sets	Sirocco fan, 6 sets	Sirocco fan, 12 sets	Sirocco fan, 6 sets	Sirocco fan, 8 sets	Sirocco fan, 24 sets
Ventilation	2 sets	2 sets	2 sets	2 sets	3 sets	4 sets
Power source	The source of electric power and voltage for 3P are different by each country.					
Heater capacity	24KW	36KW	37KW	36KW	42KW	60KW

* Measurement unit: mm

THERMAL-PASS CHAMBER Series

300°C
MAX.

Large precision type heat drying sterilization system

TMR Series

Almighty type for heating, sterilizing, cooling and preserving

The thermal-pass chamber TMR is a fully automated large scale almighty wheeled drying system which performs heat-blow drying, dry sterilizing and cooled preservation in one cycle. The work can be transported in and out on the tray rack. Front and back doors are used so that the work can be sent from the cleaning chamber to the germ-free chamber.

Standard control attachments

- Programmed temperature adjuster, Digital setting Max. 300°C with micro computer
- Sensor, sheath type double sensor
- Heater control, solid state relay
- Heater capacity display
- Amperemeter with CT
- Overheat prevention device 0 ~ 300°C
- Abnormal display, flicker display, intermittent sound buzzer circuit
- Cycle timer, digital Quartz timer, 1 min. ~ 99 hrs. 59 min.
- Power switch circuit breaker, lamp power switch by depressed key
- Circuit protector, circuit protector (high speed type) motor thermal relay
- Door open/closed indicator blower and circulation fan stop circuit, limit switch
- Temperature recorder chart width 100mm recorded at 6 points, 0°C ~ 300°C making recorded at 3 points
- Blower switch, lamp push button switch (automatic dumper combination)

Standard attachments

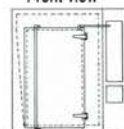
- Other finish, SUS-304 with hair-line finish
- Inner chamber SUS-304, BA finish
- Door, cleaning chamber and germ-free chamber, both single leaf door.
- Inside processed finish, Argon welding finish and silicon compound inner chamber, washable with water
- Packing, formed silicon packing
- Insulating material, super wool mat ceramic fibre
- Door fixture, 32e gear latch, large size
- Air flow adjuster upper-center-bottom 3 way distribution with stopper
- Transmission, Belt type transmission
- Shaft SUS-304 ø40mm, reverse screw key trench



- Intake heat blower (left photo)
- Automatic open/close exhaust blower (right photo)

Front view

Side view



Specification

	TMR-80	TMR-110
Thermal pass chamber		
Inner dimensions	W800 × D1050 × H1500	W1100 × D1200 × H1500
Outer dimensions	W1760 × D1300 × H2050	W2060 × D2350 × H2050
Power source	* The source of electric power and voltage for 3P are different by each country.	
Heat source	Seath heater SUS-304, 24KW	Seath heater SUS-304, 36KW
Circulation fan	ø230mm Sirocco fan 2 ea., SUS-304	ø230mm Sirocco fan 4 ea., SUS-304
Intake blower	Absolute filter, 1 ea., installed within	Absolute filter, 1 ea., installed within
Exhaust	Auto dumper, single point adjustment	Auto dumper, double points adjustment
Motor	200V, 3 phase, 4P, 0.75KW, 2 ea	200V, 3 phase, 4P, 0.75KW, 4 ea
Wheeled truck	Outer truck 2 ea., Inner truck, 2 ea., SUS-304	Outer truck 4 ea., Inner truck, 4 ea., SUS-304
Maximum temperature	300°C	300°C

* Measurement unit: mm

Temperature range RT + 50°C ~ + 300°C Max.



- Set-in double leaf type door at the front and back of the dry heat sterilizing chamber.
- For the truck, a separable type with racks for loading of tray and for transferring, is adopted. (optional).
- Temperature setting is done digitally with great precision. The sterilizing timer and cooling timer can be set from 1 min. ~ 99 hrs. 59 min.
- The inner and outer material of the chamber is stainless steel, SUS-304. It is washable with water.



We support toward 21 century
the work station of scientific environment
that is exceptional to Asahi Kagaku's

VACUUM EQUIPMENT Series

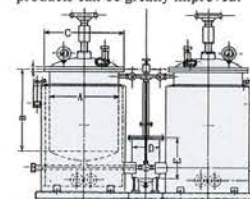
Vacuum infiltration system

MODEL GT·GH

This equipment is mainly used for the infiltration of insulating oil into the electric materials. For transformer, motor coils, condenser cable, etc.; made fully vacuous of any air and dampness inside a vacuum chamber in order to let insulating oil be thoroughly infiltrated into the product to bear an electric character. For others, the system is widely used for the filtration of water repellent and non-inflammable materials to the wood fibres and of plastic filling material to cavities in the metal castings in order to add quality and resistance to the products.

● Characteristics

- (1) Our standard products give attention to the speed for expelling the exhaust air, — 15 minutes or less after 10^2 torr vacuum has been reached.
- (2) With the rational design, adjustment at the front panel is made easy, strong and compact.
- (3) With the heating system, the time for temperature rising is short and the temperature is accurately controlled so that the finish of products can be greatly improved.



	A	B	C	D	E	Capacity	Weight
30	300e	400H	380e	150e	200H	20r	
40	400e	400H	380e	150e	200H	28r	
50	400e	500H	480e	200e	300H	63r	
60	600e	700H	700e	300e	400H	198r	
70	700e	800H	800e	300e	400H	307r	
80	800e	900H	900e	350e	450H	450r	
90	900e	1000H	1000e	350e	450H	636r	
100	1000e	1100H	1120e	400e	500H	863r	
120	1200e	1400H	1320e	500e	600H	1600r	



Single head type		Double head type		Measurement of chamber	Vacuum pump in use	
Non-heating type	Non-heating type	Heating type	System for heating	Inner diameter(s) x Height	Exhaust volume	Motor
GT-30S	GT-30W	GH-30W		300 x 400	150l/min	400W-1/2
GT-40S	GT-40W	GH-50W		400 x 500	300l/min	"
GT-50S	GT-50W	GH-50W		500 x 600	50l/min	750W 1
GT-60S	GT-60W	GH-60W		600 x 700	"	"
GT-80S	GT-80W	GH-80W		800 x 900	"	"
GT-100S	GT-100W	GH-100W		1,000 x 1,000	2,000l/min	"

SS type Vacuum pump



Type	Exhaust speed l/min.	Obtainable pressure Pa (torr)	Gas ballast valve open Pa (torr)	Motored type	Oil volume	Rotation rpm.	Intake Se	Weight
SS-2	20	10^{-1} (7.5×10^{-2})	With UST type, gas ballast valve is optional.	65	0.8	600	16e	16
SS-3	35	" (")		200	1.0	"	"	19
SS-5	50	" (")		200	1.0	"	"	19
SS-10	100	" (")		250	2.0	"	23e	21
SS-15	150	" (")		300	2.5	"	"	26
SS-30	300	" (")		400	2.5	"	30e	40
SS-50	500	" (")		750	3.0	"	"	45

Thermal treatment equipment A wide range of line-ups to meet all the needs.

Conveyor models

Heater air circulation type conveyor oven

It has an independent temperature control system for each zone. By adoption of a highly efficient heater unit and inspection door, and not excluding its temperature distribution, efficiency and safety have been achieved. This model is most suitable to automate and save energy for such processes as, insulation of electric parts, thermal hardening of fixing materials and backing of semiconductor and metals.

Temperature	Maximum 200°C, 300°C, 400°C
Conveyor width	100mm ~ 2,000mm
Height of chamber	100mm ~ 1,000mm
Length of chamber	1m ~ 2m
Material of chamber	SUS-304, stainless steel
Type of conveyor	Stainless steel net belt, continuous bar transmission, intermittent transmission, changeable speed

Two-range type continuous drying chamber

This equipment has been developed for drying the plated print boards. It has a two-range transmitting conveyor and using effectively the limited open space has up-graded the capacity for processing. Types for three-range and four-range are available on request.



Science oven series 300°C MAX

When the record of temperature is requested

This equipment is available for taking measurements, or for collecting the trial data in the tests. It will provide invaluable data when a strict temperature control is required.



High temp. oven series 600°C MAX

With appropriate temperature, make the operation ideal

This is the latest model which uses a highly reliable non-contacting relay to control at one end of the power supply to the heater. With its programmed micro computer automatic temperature controller interlocked, the temperature is controlled in an ideal way.



Convection oven series 400°C MAX

With programmed high precision heating chamber check various conditions

In CP series which have a digital programmed temperature control system, temperature control can be pre-set up to 400°C; and with its two-range and three-range type chambers, various condition of temperature/time can be arranged to produce the required thermal environment efficiently.



Dry zet oven series 200°C MAX

A powerful series of space saving design

Z-60 model which is a space-saving body but of the largest dimension drying oven in the class, it is available in a wide range of applications ranging from laboratory to production plant, favoured for its fully efficiency-minded design.



KKT series

Precision low and normal thermal and normal humidity chamber

This is an excellent chamber for normal temperature and humidity control provided with a controller system for a wide range of temperatures from low to high and with humidity controls also. It is equipped with the latest freezing compressor, but it is designed for saving energy by use of a high efficiency, heat exchanger and high quality insulation materials. This is the latest model of low cost and of compact size.



	Temperature range	Interior measurement (W x D x H)
0 type	0°C ~ +80°C	600 x 600 x 600mm
2 type	-20°C ~ +80°C	800 x 800 x 800mm
4 type	-40°C ~ +80°C	1000 x 1000 x 1000mm

AKT series

Precision low temperature equipment

The door opening space is designed similarly to the effective inner measurement of the chamber so as to make handling of any large size product easy. With the use of a specialized truck, putting in/drawing out of the work is made easy. A unique method for circulation is provided and it is fully equipped with measuring units. It can also be operated by program.



	Temperature range	Interior measurement (W x D x H)
0 type	0°C ~ +80°C	600 x 600 x 600mm
2 type	-20°C ~ +80°C	800 x 800 x 800mm
4 type	-40°C ~ +80°C	1000 x 1000 x 1000mm

UL series

Super low and normal temperature chamber

By adoption of a two-source freezing system and a heat exchanger using the return gas for cooling, the programmed operation for prompt cooling and prompt heating can be worked. It is available for the standards testings of various kinds of matters and for low temperature refrigeration of large quantities.

Temperature range	Interior measurement (W x H x D)
-80°C ~ +180°C	600 x 600 x 600mm
	800 x 800 x 800mm
	1000 x 1000 x 1000mm



A 24-hour supervisory system that continues day and night.

Asahi Kagaku is devoted to the normal running of mechanical equipment.

After delivery of a product, the entrepreneurial attitude becomes apparent in the after-care.

It would be no exaggeration to say that this attitude becomes the standard for judging between right and wrong.

Since the company's establishment, approximately 580 types of machines have been standardized.

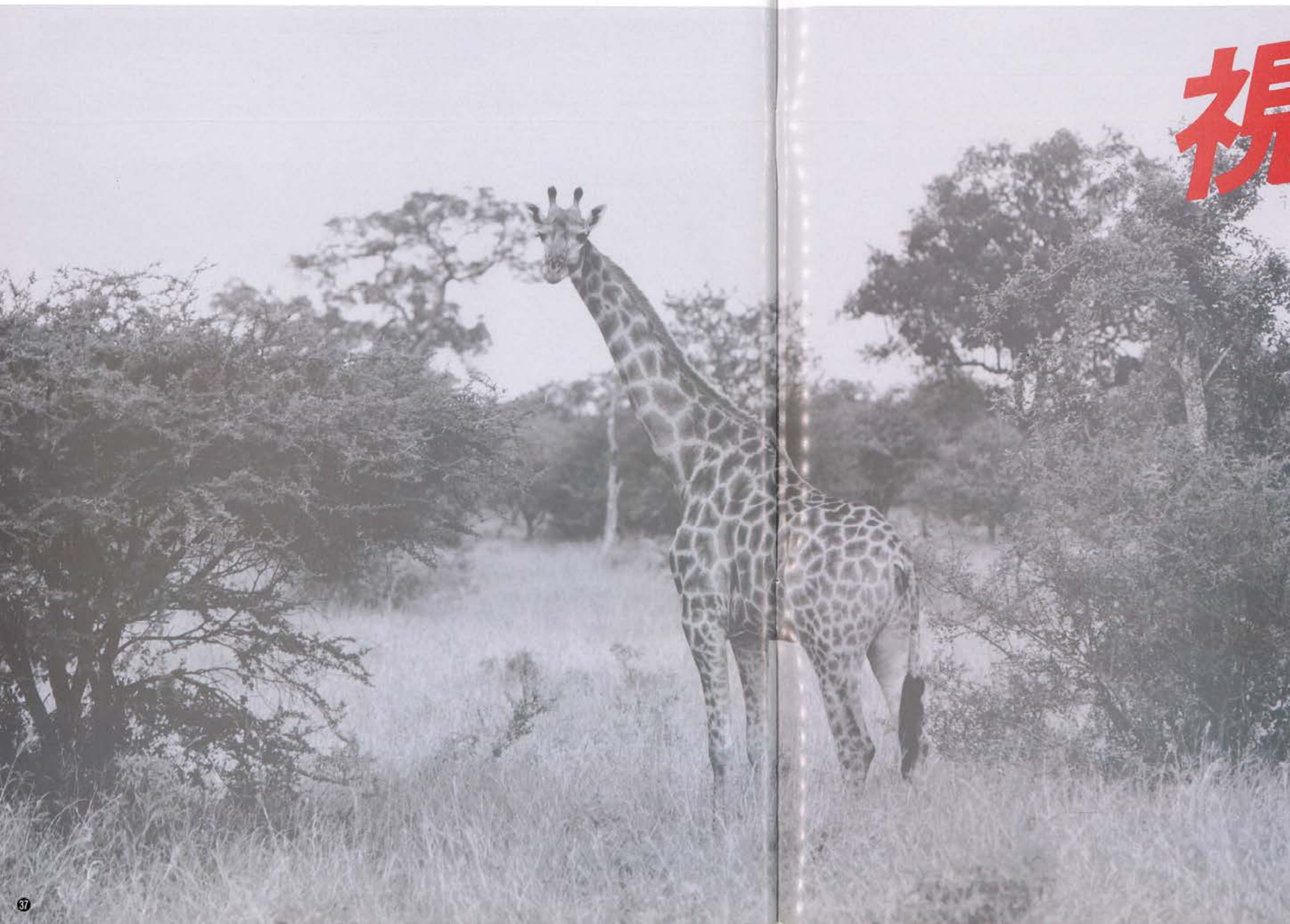
Alive here is the concept of setting forth a 10,000-hour guarantee system for the first time in the industry.

Products to meet enterprises' needs are developed and their manner of operation is carefully watched.

We are always placed in the position of anxious parents who are concerned about their daughter leaving home to be married.

mi-ru = Observing

見る。



H I G H
QUALITY
&
SAFETY

A MANUFACTURER OF DRYING MACHINES AND HEAT TREATMENT PLANT

ASAHI KAGAKU CO., LTD.

ASAHI KAGAKU PRECISION PERMANENT
TEMPERATURE CHAMBER SERIES

CATALOG

SCIENCE OVEN

HIGH TEMP OVEN

CONVECTION OVEN

JET LINE

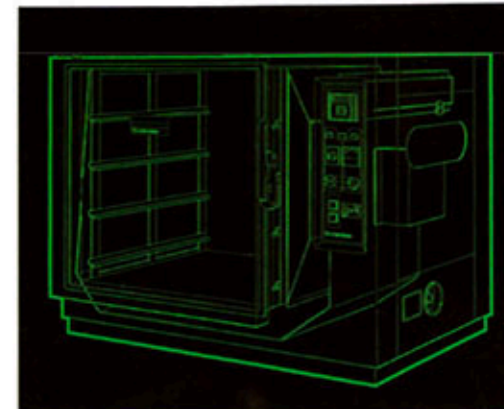
DF CHAMBER

DRY Z OVEN

DRY THERMOS

THERMAL PATH CHAMBER

CLEAN OVEN



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A Manufacturer of Drying Machines and Heat Treatment Plant

 旭科学器械株式会社

AGENT

 ASAHI KAGAKU CO., LTD.



THERMAL PLANT TECHNOLOGY VENTURES INTO THE 21ST CENTURY

Now that the 20th century is going out that brought tremendous creations and sophisticated scientific technologies in the history of mankind, the human interest is directed toward the coming age of the 21st century.

Now what exactly is the age of the 21st century?

The precise vision is hidden in the mist of various future possibilities, just as nobody in the first part of this century foresaw the present development of science.

The world of the 21st century, however, will be built by the advance visions and perspectives of the people engaged in the development of science. Without this, there will be no scientific development.

Environmental science is a science intended to foresee the unknown environments of mankind, and to pursue new possibilities. Asahi Kagaku Kikai has always provided the most advanced "environment" with firm perspectives for the future society in the flow of continuing scientific progress.

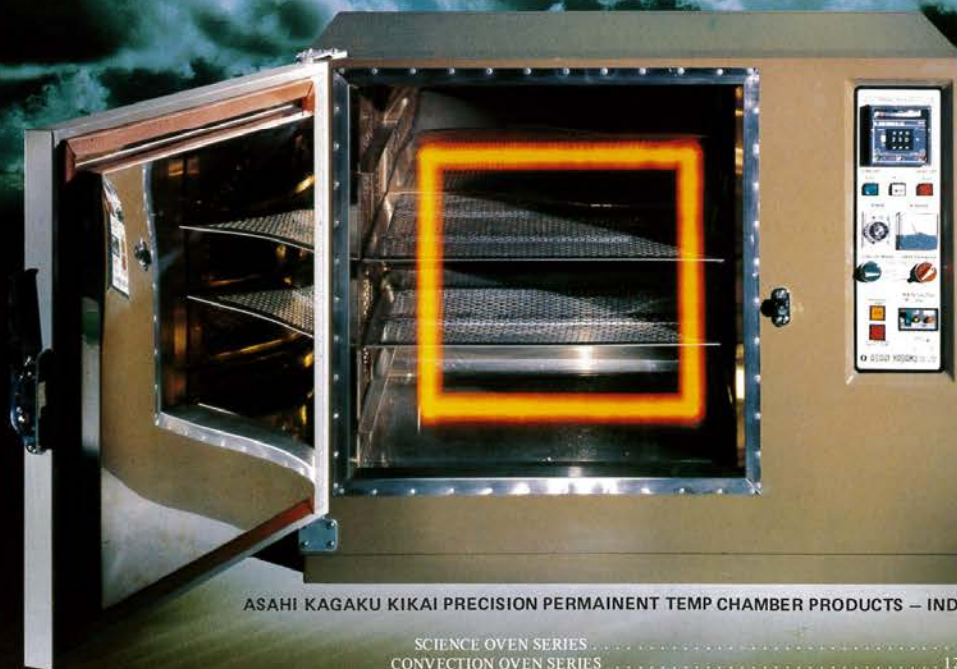
A new scientific performance will come from a new "environment" That is where the pride and company principles of Asahi Kagaku Kikai as a thermal disposal plant manufacturer line.

Since its establishment in 1966, Asahi Kagaku Kikai has been endeavoring to develop the products in need by the society of the contemporary age, and to improve their quality. It has standardized about 300 items such as Heat Circulation Permanent Temp Chamber.

It has instituted a system of providing warranty for 5,000 hours — the first of its kind in this industry— and has made efforts to improve quality and to increase its credibility.

Asahi Kagaku Kikai can respond to all the needs including all permanent temp chambers, environmental testing equipment, factory layouts, manufacturing process running pattern designs and installations.

Asahi Kagaku Kikai is a very pioneer of making scientific environments.



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OUR PRODUCTS WILL DEVELOP A NEW AGE OF
PRECISION PERMANENT TEMP CHAMBER, A UNIQUE
HIGH PERFORMANCE

NEW 9 SERIES OF ASAHI KAGAKU

The precision permanent temperature chamber series of ASAHI KAGAKU has a complete and comprehensive performance including its easy operations, credibility and safety besides its superb temperature distribution characteristics. We are proud of the good reputation in view of its international standards. Each series is segmented into temperature range, standard control function and attachments. We are ready to respond to a wide range of requirements such as burning conditions of metals, curing, and a simulation of a composite situation besides heat drying.

- PRECISION HEAT CIRCULATION PERMANENT TEMP CHAMBER
- PRECISION HEAT CIRCULATION HIGH TEMP OVEN
- PRECISION HIGH CIRCULATION CONVECTION CHAMBER
- SMALL REMOTE ULTRA-RED CONTINUOUS CONVECTION OVEN
- TABLE-TYPE HEAT PERMANENT TEMP DEVICE
- WHEELED PRECISION HEAT CIRCULATION PERMANENT TEMP CHAMBER
- TABLE-TYPE ELECTRIC THERMOSTAT
- DRY HEAT STERILIZER PERMANENT TEMP INSTRUMENT
- DUST-FREE PERMANENT TEMP CHAMBER

AN

Shelves for heavy materials attached

R

Automatic temperature recorder attached

C

Cushion attached

G

Aging testing gear attached

YPR

Microcomputer program controller attached Recorder digital setting and instructions

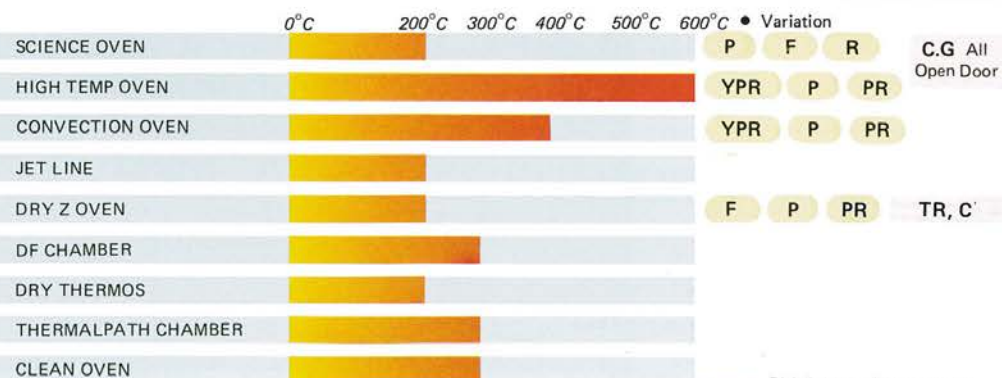
F

Digital automatic temperature instruction and adjusting meter attached PID self-controller

P

Digital automatic temperature instruction and adjusting meter attached program controller.

C.G All Open Door



Here is the ideal high capability this age wanted.

You cannot discuss the true permanent temp chamber without realizing a fine temperature distribution.

The permanent temperature chamber enables to create a scientific circumstance of all kinds that can produce new technologies and products. The temperature distribution is the most important capability for the permanent temperature chamber. Generally, temperature distribution tended to change easily depending on the heating capacity, air flow of the fan, air intake and exhaustion, and the size of the work. ASahi KAGAKU gave a severe examination into the temperature distribution and developed an epoch-making middle-sized permanent temp chamber series which goes beyond the existing technology of permanent temp chamber. The product line consists of 9 series including a full temperature range between 0 - 600°C such as the science oven. We have devoted our research and developed activities in these 9 series, and as a result, they are capable of controlling every corner of the chamber. We have applied a new aerodynamic structure, a powerful special heater, a large capacity fan, and a 3-fold insulating material/high temp air direction gallery which has a high performance of heat insulation and heat maintenance. We have now realized the ideal temperature distribution.

The incomparable temperature rising capability which can be achieved only by one who has a thorough knowledge of permanent temperature chamber

Because of the introduction of a power heat mechanism, the chamber temperature will rise overwhelmingly fast by switching ON after setting the temperature by the power heat dial in the panel. The temp rising time will be minimized and the temperature will keep a stable balance after reaching the set temperature. In addition, the heat loss by the opening and closing of the door will be restored quickly and an adequate temperature in the chamber will be maintained. This enables an exact temperature setting and holding.

Perfect safety device and long-term assurance. We have the firm responsibility to assure you of our reliability.

The permanent temp chamber of ASahi KAGAKU is provided with various kinds of safety devices as standard equipment. These devices include a overheat prevention device which will prevent overheating in the chamber, a flicker-type reset lamp with a buzzer, a circuit protector which protects the internal circuit from an abnormal electric current, and an electric circuit breaker. These safety mechanisms set 3-4 fold are designed to function as soon as a trouble occurs and prevent the work and the chamber from getting damages from the accident. The ASahi KAGAKU permanent temp chambers have a 5000 hour warranty for the first time in the industry. The users are given with every assurance.

HEAT RESISTANT DOOR

The door of the chamber is aerodynamic structure and therefore it will not hold heat at the door surface when the temperature in the chamber rises high, thus it will cause no problem for the operation. The door fixture is slide-type rotation handle, and the door hinge is made of aluminum die cast. Therefore, the air tightness in the chamber and the operability is superb.

METERING TERMINAL HOLE

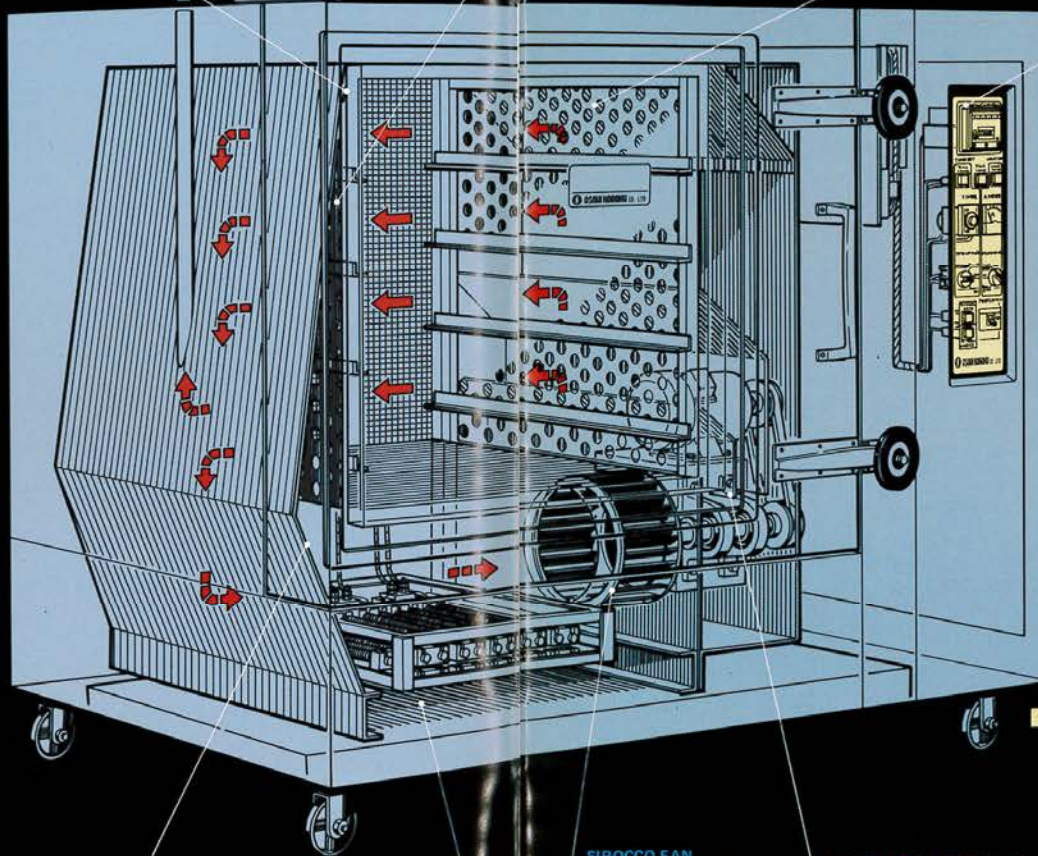
Terminal holes with a fixed flange are set at two points in the back wall and at point on the operation panel. The holes will enable you to know the temperature conditions in the chamber by the sensor mechanisms.

HIGH PERFORMANCE PERMANENT TEMP CHAMBER

A new type high performance permanent temperature chamber whose temperature distribution capability has been drastically improved in comparison with the conventional product. The interior walls are made of stainless steel SUS 304 which has high corrosive resistance. It keeps from getting rusty from high temperature. The shelf nets are capable of withstanding the weight of 10 KG (NS type) and 50 KG (PS type) (weight load per a shelf).

FRONT OPERATION CONTROL PANEL

A front operation panel in which most of the operation knobs are installed. Operations of various control can be performed on the front panel such as the digital automatic temp display adjuster, thyristor power adjuster, multi timer, power switch and automatic temp recorder.



High temp oven HF-60

NEW AERODYNAMIC STRUCTURE

A unique aerodynamic structure developed by us, by pursuing the advantages of temperature distribution which is the characteristics of the heat circulation drying oven. The air from the sirocco fan will be distributed rationally on each shelf and supplied in the chamber. We have been able to achieve the maximum temperature distribution with the least temperature deviation.

HEATER UNIT

This is a high power nichrome heater which controls the single wire surface temperature upto 800°C. It can withstand a use for the long time at a high temperature as it has a good heat efficiency and a controlled load ratio. It consumes less electricity than the conventional product and will help save energy.

SIROCCO FAN

This sirocco fan with a bellmouth shape air intake hole is very quiet but powerful and can send a large capacity of air.

AIR DIRECTION GALLERY

This will adjust the heat air sent from the fan to the direction of shelves in upper and lower parts. It will stabilize the heat distribution to the work and let the work absorb heat.

Quality products will be born only from a high technological production system

ASahi KAGAKU which has been developing new products one after another since it first manufactured the first machine in 1963, has also been trying to improve and stabilize the quality of the products by establishing a production system, after having standardized products ranging more than approx. 300 kinds. We have the R & D department which constantly works to develop new products which are better than before, and the manufacturing department which aspires to produce the stable and quality goods. New tasks are feedback between the two departments, details are discussed, and the new products are born with the best quality and no other company can do the equal. Times change and the tasks may change as the age changes. That's why an ideal permanent temperature chamber must always be regarded as the biggest task.

Quality, price and delivery All these are proven by our performance and reliability

The products manufactured by our most rational production line are satisfactory in respect of quality, price and delivery period. We have already proven this in such countries as South Korea, Taiwan and other South-eastern Asian countries, North America and Middle-east countries. Our export transactions with them are increasing every year. Proven quality, reasonable price and rapid delivery system — these three are the characteristics of ASahi KAGAKU.

Wide variations are available. We are ready to respond to all requirements.

The precision permanent temperature chamber 9 series are our full line which are capable of metal annealing, hardening etc., semiconductor curing, age testing, heat sterilizing drying and preserving, and dust-free heat drying. These are used in almost all areas of industry such as the metal industry, semiconductor industry, pharmaceutical industry, medical industry and laboratories etc. Each series has got many different variations depending on the chamber capacity and the standard control attachment. Depending on the user's needs, the best type may be selected for use.



HIGH QUALITY & SAFETY

Science Oven Series

Science Oven Series ● Heat circulation precision permanent temp. chamber 200°C max

SF 60 80 100 Series

Stable operational capability for continuous operation

S series is a precision heat circulation medium size permanent temp chamber which adapts a high technology which was developed in the production of large industrial dryers. We recommend this series for the use in the manufacturing sector, research sector, as it is a convenient medium size permanent temp oven.

F PANEL STANDARD CONTROL ATTACHMENTS

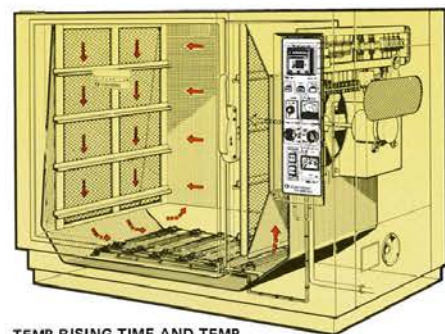
- Digital automatic temp display adjuster/PID control, and CA sensor
- Flicker lamp with a buzzer at abnormal time
- Digital quartz timer, 0.01 second — 99 hours 99 minute (3 selections)
- Circuit breaker
- Circuit protector
- Motor protection thermal relay
- Amperemeter
- Display with names
- No-contact-point relay
- Automatic fan stop mechanism at door open/close times

S SERIES STANDARD ATTACHMENTS

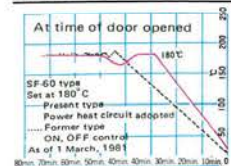
- Chamber interior — stainless SUS304
- Chamber exterior — Heating part SUS304 (Other parts steel)
- Shelves — Stainless SUS 304 (10 kg & 50 kg)
- Packing — Silicon Foam Packing
- Insulating material — Blanket 15 mm
- Painting — Plating
- Color — Brown twin colors
- Cap tire cord — 3 M
- Transparent vinyl cover — 1

PRECISE TEMP/TIME CONTROL AND QUALITY GUARANTEED

The digital PID temp adjuster and the multi-timer will automatically control the temperature and time to make it appropriate to the work.



TEMP RISING TIME AND TEMP RESTORING HAVE BEEN SHORTENED



This is a superior medium size permanent temp chamber that treats the work with the external terminal stainless sheath heater, a new structure developed by the technical division of Asahi Kagaku Kikai.



TOP VIEW

FRONT VIEW

SIDE VIEW

SPECIFICATIONS

S Series	S-60	S-80	S-100
Internal Dimension	W600xD600xH600mm	W800xD800xH800	W1000xD1000xH1000
External Dimension	W1100xD825xH855mm	W1300xD1025xH1085	W1500xD1225xH1285
Total Weight	110kg	180kg	250kg
Max Temp	199°C	199°C	199°C
Power	200V-1P-30A	200V-3P-20A	200V-3P-30A
Heater	Stainless sheath 3KW(1KW, 2KW)Ext. Tmrl	Stainless sheath 6KW(2KW-3KW)Ext. Tmrl	Stainless sheath 9KW(3KW-3) Ext. Tmrl
Main Switch	150 p	180 p	200 p
Fan	150 p	180 p	200 p
Motor	200V-60W-Single phase	200V-90W-3-phase	200V-150W-3-phase
Door	Single Door, no window	Single Door, no window	Single door, window lamp
Shelves	Free 11 shelves	Free 15 shelves	Free 19 shelves
Shelf Load	40 kg per shelf (200 kg)	40 kg per shelf (250 kg)	40 kg per shelf (250 kg)
Shelf Holder	4 holders	5 holders	6 holders
Exhaust Duct	W100xD80mm	W100xD80mm	W120xD80mm
Over Temp Prevention	Prodegy 50-220°C	Prodegy 50-220°C	Prodegy 50-220°C

SP 60 80 100 Series

- Digital program thermostat
- Double-leaved hinged door only S-100

New, High caliber, precision permanent temp chamber digital program

This is a temperature adjuster with a micro-computer which has a multiple functions which has been developed for a precision permanent temp chamber. It remembers the desired program patterns and can accurately carry on the temp/time control. We would like to recommend this for the future permanent temp chambers.

Latest attachments

1. The door is made of SUS304 color stainless (S-60, 80) with high resistance against corrosion, heat etc. and it is very clean.
2. Triple heat resistant glass window. (S-100 is attached with an interior lamp.)
3. The circulation fan stops when and if the door opens. It is safe and efficient.



SP 60 80 100 C Series

- Explosion proof door
- Double-leaved hinged door only S-100

Appropriate for heating and drying organic liquids

This is absolutely a requisite for drying a wad which emits vapor gases.

Safe heat treatment

It conducts a safe heat treatment with 2-phased patterns after emitting vapor gases by giving a preliminary low temp drying first, by using a program pattern.



Explosion prevention cushion door

1. A explosive prevention cushion door at the back which will release an explosive pressure at 300mm angle (S60), 500mm (S80) and 600mm (S100).
2. The front door (without window) is fixed with a powerful 25p gear latch.



SP 60 80 100 R Series

- With temperature-recorder (thermostat)
- Double-leaved hinged door only S-100

Four use to record temperature

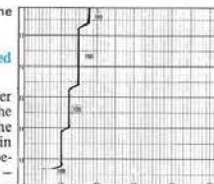
You may use this series when a trial data is required such as the measurements and experiments of a work. It will provide with a valuable data in conducting a severe temperature control.

PR Attachments

- Automatic temperature recorder — Chart width 100mm, 6 point 0-300°C display (CA)
- Sensor — 3 point measurement (CA)
- Measurement terminal hole — Fixed at 3 points, with flange: 2 points at the back and 1 point in the distributor panel

A chart with a width of 100mm is used which makes it easy to read.

The automatic temperature recorder records on a wide 100mm chart the chamber temperature detected by the sensor which are built in 3 locations in the chamber. It will display the temperature shift during operation from 0-300°C. Measurement terminal holes are also fixed at two locations of the back side and on the distribution panel.



SP 60 80 G Series

- With revolving ring

Used for age testing of resin etc.

The G series are the permanent temperature chambers with a rotation ring suitable for age testing resin or rubber.

G Attachments

- Motor for rotation — 5r.p.m.40W geared motor fixed at the upper part
- Rotation shaft — Stainless SUS-304 30mmφ removable
- Rotation ring — Stainless SUS-304 350mmφ and 250 mm, one each
- Motor switch display

The ring is a high precision mechanism

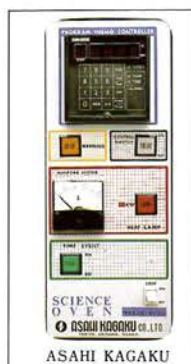
The rotation ring with a high precision mechanism will give a transmission power necessary for measuring and testing the work and will create a condition fit for the purpose of the test. It works as a great simulator for age testing. The operation panel will give a display while the rotation ring is in operation.



P Panel

Respond to the needs with our programs

We will help you realize all the wishes for the permanent temp chamber.



Digital and program temp display adjuster
A. Program operation, easy for anyone to use. The touch-key operation patterns are recorded in the computer. Now we can start the automatic operation.
B. It is the auto-tuning which makes sure of the temp control. The computer will recognize the temp rising curb. The auto-tuning enables an automatic PID control.

AN Section

Punch Hole Dimension

Program pattern chart example
A multiple-purpose program

Power switch and circuit breaker
 Push button switch. It lights when pushed. A high caliber circuit breaker which will be installed inside the inspection door. It will break the power in case of an electric leak.

Over-heat prevention device
 It will protect the work and the permanent temp chamber by breaking the heater circuit, when the temperature rises beyond the set temperature.

Abnormal signal warning buzzer
 The lamp and buzzer will notify an abnormal situation.

Digital PID temp display adjuster
 The PID with a micro-computer makes it easy to operate due to the digital setting and display mechanism. It has little overshoot or hunting because of the temperature setting at P, I, and D, and perfectly controls the temperature.

No-contact-point relay (SSR)
 It is almost free from sparks and noises because a no-contact-point relay is used as a heat source relay. It is a safe and quiet. It is a semi-conductor and therefore has a longer life than a magnet relay.

Multi-timer
 It starts when the temp reaches the set temp. Switchable in four ways; 30H, 3H, 30M and 3M.

Amperemeter
 It displays the heater load amper. It accurately controls the heat source.

Temp chart
 No time loss because of PID control.

Door open/close fan stop/start
 It will stop or start the fan when the door is opened or closed. It means a safe operation. (S100 is attached with a interior lamp)

Motor protection circuit
 It will break the circuit and protect the motor when the motor circuit breaks down.

F Panel

A very sure control with digital/PID control

The F panel has got the latest attachments in a wide range.



For Light Weight

Shelf nets 10kg

For Heavy Weight

Shelf nets 50kg

SHELF NET SPECIFICATIONS (10KG/50KG)						
MODEL	10KG-60	10KG-80	10KG-100	50KG-60	50KG-80	50KG-100
Dimensions	W585D570	W785D770	W985D970	W585D570	W785D770	W985D970
Weight Resistance	10KG	10KG	10KG	40KG	40KG	40KG
Material	Stainless	Stainless	Stainless	Stainless Punch	Stainless Punch	Stainless Punch

Carrier with a stopper FH

MODEL	60 FH-60C 60H	80 FH-80C 80H	100 FH-100C 100H
Height mm	450	450	450
Caster φ	75	100	125

REINFORCED WINDOW

Product	Model	Dimensions mm	Temp Resistance
Reinforced Window	M170/210	W170xD210	Max200°C
Heat Resistant Window	M255/235	W255xD235	Max400°C

TEMP SENSOR

Name	Model	Heat Resistant Cord	Temperature
CA Glass Lead	1500/1MM	1.5m	Max200°C
Sheath/S	300/3.2S	2.0m	Max600°C
Sheath/W	300/3.2W	2.0m	Max600°C

SILICON CAP ATTACHED TO THE TERMINAL HOLE

Model	Terminal Hole φ	Silicon Cap φ
SI/CN-50	50	Upper55 Lower 48
SI/CN-38	38	Upper 41 Lower 36
SI /CN-25	25	Upper 28 Lower 23

RECORDER

Model	Temperature
CR106K031	300°C
CR106K061	600°C

GAS INJECTION FLOWMETER

Model	Graduation/ MIN
VS-1502	0.7 ~ 7L
SCI-KS2502	50 ~ 500L

Convention Oven Series

Convention Oven Series ● Heat circulation precision heating chamber 400°C max

CF 60 80 100 Oven

High precision 400°C MAX OVEN

The C series is a new comer to the precision heat circulation medium permanent temp chamber. Quality materials are used for the fan, door heater and the chamber body as the temperature ranges from the normal room temperature to 400°C max. It has a superb temperature distribution and temperature rising characteristics. It is stable and has a number of new functions as its standard function. It can be used as a multi-purpose heat treatment device, such as high temperature heating, long life, testing, plating, etc.

STANDARD CONTROL ATTACHMENTS

- PID Digital automatic display adjuster
- CA sheath sensor
- Flicker lamp and warning buzzer
- Digital quartz timer 0.01 second ~ 99 hours 99 minute (3 selections)
- Circuit Protector
- Motor protection thermal relay
- Ampere meter
- Display lamp with names
- No-contact-point relay
- Automatic fan stop at door open/close

STANDARD ATTACHMENTS

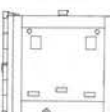
- Interior chamber Stainless SUS304
- Exterior chamber Heat contact area SUS304 (Others steel)
- Shelves Stainless SUS304 (10KG ~ 50KG Option)
- Packing material Asbest packing
- Insulating material Bulk fiber 100mm/t
- Painting Plating
- Color Brown Twin color
- Transparent vinyl cover



TOP VIEW

FRONT VIEW

SIDE VIEW

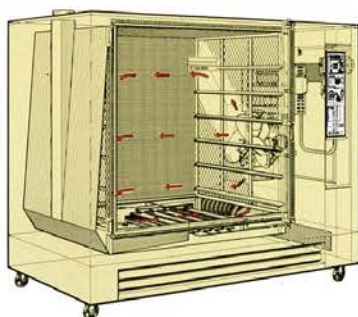


SPECIFICATIONS

	C - 60	C - 80	C - 100
Internal dimensions	W600 x D600 x H600	W800 x D800 x H800	W1000 x D1000 x H1000
External dimensions	W1360 x D805 x H1345	W1660 x D1005 x H1545	W1860 x D1205 x H1880
Total weight	300KG	300KG	450KG
Max temp	399°C	399°C	399°C
Power	200V · 3P · 20 A	200V · 3P · 30 A	200V · 3P · 60 A
Heater	Stainless sheath 6KW (3KW-3) Ext.Tmnl	Stainless sheath 9KW (3KW-3) Ext.Tmnl	Stainless sheath 18KW (3KW-6) Ext.Tmnl
Main switch	Circuit breaker 30A	Circuit breaker 30A	Circuit breaker 60A
Fan	Stainless sirocco fan 1780-1	Stainless sirocco fan 2050-2	Stainless sirocco fan 2050-2
Motor	3 phase 200V · 0.4KW-1	3 phase 200V · 0.4 KW-1	3 phase 200V · 0.4 KW-2
Door	Single (Stainless Hair line)	Single (Stainless Hair line)	Single (Stainless Hair line)
Door fixture	250 gear latch	Slide round handle	Slide round handle
Shelves	Free 8 shelves	Free 11 shelves	Free 14 shelves
Shelf resistance	40KG per shelf (200KG)	40KG per shelf (250KG)	40KG per shelf (250KG)
Shelf holder	4 holders	5 holders	6 holders
Exhaust pipe	Out 48 mmφ	Out 48 mmφ	Out 60.5 mmφ
Over temp prevnt.	So back 50-450°C	So back 50-450°C	So back 50-450°C
Caster	Stopper/100φ	Stopper/100φ	Stopper/100φ

UNIQUE HEAT CIRCULATION SYSTEM

With a cooled air blower, it can operate continuously.



Safe, energy-conscious type with little heat loss



The C series has been developed for the purpose of simulating a high temperature environment which is a requisite in the development of new technologies. It is designed to give little or no effect to the surrounding environment with heat at the time of a high temperature heat continuous operation. It has little heat loss and very efficient.

CP 60 80 100 Series

● Digital program thermostat

High performance precision heat chamber

The CP series realizes various temp and time conditions by using digital programmed temp adjuster. It creates the high precision temp environment.



Latest attachments

1. The heat contacting area and the door is made of SUS304 hair line stainless. It is corrosion-free, high resistance and clean.
2. The chamber performs a high temp continuous operation.
3. Each shelf resists 40kg. The shelves are freely located.
4. It has got a stopper and casters. It is convenient to move it.



CP 60 80 100 C Series

● Explosion proof door

Most appropriate for organic liquids heating

This is the very necessary permanent temp chamber for drying a work that emits vapor gas.

Safe heat treatment

It conducts a 2-phased heat treatment after emitting the vapor gas by giving a preliminary low temp drying by using a programmed pattern.



Explosion prevention cushion door

1. A explosion prevention cushion door is attached at the back that releases the explosive pressure from a releasing vent at an angle of (C-60) 300mm, (C-80) 500mm and (C-100) 600mm.
2. The heater relay is a no-contact-point relay and is free from sparks.
3. It is an external terminal sheath heater which limits the surface temp to a low level, and it is safe and has a long life.



CYPR 60 80 100 Series

● With event & recorder program thermostat

The program simulates the work characteristics.

The CYPR series is a high quality model that enabled a time/temp program pattern under any time/temp condition. A large number of standard attachments are installed and such options as an auto damper, an air purger etc. are available. It can respond to a variety of different conditions.



YPR attachments

Digital program controller. 9 program pattern memory. 99 segment patterns. PID Power adjusting type.

It's easier to operate.

The high performance program automatic temp display adjuster conducts a perfect automatic programmed operation in accordance with the temp condition, heater capacity and the work dimension.



CYPR PANEL

RECORDER
Accurate temp control and data conservation
Power 200V, 6 points, Sensor: CA chart width 100mm chart speed: 10.20.40 mm/h

PROGRAM TEMP ADJUSTER
It is easy to operate and has got a complex functions. It is a high precision digital program controller with a microprocessor in it.

PROGRAM SWITCH
The program controller will keep a memory. When you use it again, just press the RUN KEY.

POWER SWITCH (WHITE)
It is button switch with a lamp.

EVENTS
This is a button switch to keep various settings.

ABNORMAL WARNING DISPLAY
It warns any abnormality in the temp adjuster, heater, motor or thyristor. (option)

AMPERMETER
It is used for heater capacity control.

BUZZER STOP
You can stop the buzzer.

High Temp Oven Series

High Temp Oven Series ● Heat circulation high temp oven 600°C max

HF Series

MAX TEMP 600°C for multi-functions

This is the most basic series of all, it has the basic functions required for high temp ovens and can be used for measuring and testing which call for severe condition such as the high temperature heating and resistance testing. This series has a high generality and can be used not only in a laboratory but in various factories as a thermal plant.

F Panel standard control attachments

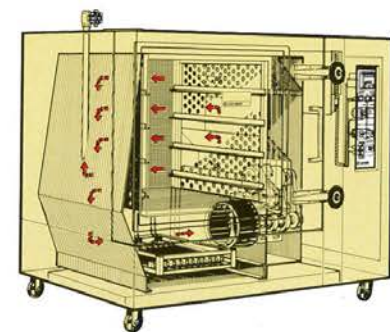
- PID digital automatic temp display adjuster
- CA sheath sensor
- Flicker lamp, abnormal warning buzzer
- Digital quartz timer, 0.01 second ~ 99 hours 99 minute (3 selections)
- Circuit protector
- Motor protector thermal relay
- Amperemeter
- Display lamp with names
- No-Contact-Point relay

H Series standard attachments

- Internal dimensions stainless SUS304
- External dimensions heat contacting area SUS-304 color stainless
- Shelf nets Stainless SUS-304 (50kg-type option)
- Air screen door, distributor chamber
- Insulating material Bulk fiber 100mm/t
- Holder Heat resistant pillow
- Painting Plating
- Color Brown twin colors
- Vinyl cover -1

Ample air flow will powerfully dry the work.

The unique heat circulationsystem which was developed by long-term research and planning by ASAHI KAGAKU, can force the heat air to circulate efficiently because of the powerful heater and fan.



A unique sirocco fan



The secret for the high power of H series is the heater of a special structure built in the lower part of the chamber and the sirocco fan. The heat air departing from the fan has a good temperature rising, distributing and recovery characteristics.



TOP VIEW

FRONT VIEW

SIDE VIEW

SPECIFICATIONS

	H-60	H-80	H-100
Internal dimension	W 600xD600xH 600	W 800xD800xH 800	W 1000xD1000xH1000
External dimension	W1450xD850xH1345	W1660xD1005xH1545	W1860xD1205xH1880
Total weight	230KG	300KG	450KG
Max temp	599°C	599°C	599°C
Power	2000V-3P-60A	200V-3P-60A	200V-3P-120A
Heater	Nichrome heater 12KW (2KW-6)	Nichrome heater 15KW (2KW-6)	Nichrome heater 27KW (3KW-9)
Main switch	Circuit breaker 60A	Circuit breaker 60A	Circuit breaker 120A
Fan	230p-1	230p-1	230p-2
Motor	3 phase 200V-0.75KW	3 phase 200V-0.75KW-1	3 phase 200V-0.75KW-2
Door	Single (color stainless)	Single (color stainless)	Single (color stainless)
Door fixture	Slide round handle-2	Slide round handle-2	Slide round handle-2
Shelves	Free 8 shelves	Free 11 shelves	Free 14 shelves
Shelf resistance	40KG per shelf (250KG)	40KG per shelf (250KG)	40KG per shelf (250KG)
Shelf holder	4 holders	5 holders	6 holders
Exhaust pipe	OUT 25mmφ	OUT 32mmφ	OUT 38mmφ
Over temp rise prevention	CA. 0~600°C	CA. 0~800°C	CA. 0~600°C
Caster	Stopper/100p	Stopper/100p	Stopper/100p

HP Series

● With digital program micon built-in

An ideal operation at the best temperature

This is a new machine which uses a no-contact-point relay. It can achieve an ideal temperature control with the microcomputer programmed automatic temp adjuster.



P Panel standard control attachments

- Digital program automatic temp display adjuster
- CA sheath sensor
- Flicker lamp with warning buzzer
- Circuit protector
- Motor protector thermal relay
- Amperemeter
- No contact point relay
- Display lamp with names
- Door open/close fan stop/start device
- Event switch (Option)



HPR Series

● With digital program micon built-in

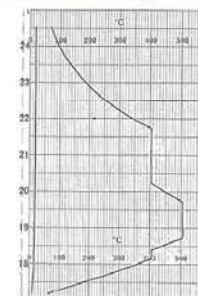
Equipped with the latest mechanisms

A micro computer programmed automatic temp adjuster and a no-contact-point relay are the normal attachment. In this series you have an automatic temp recorder in addition to the normal attachments. It has got a satisfactory function in every aspect.



PR Panel standard control attachments

- Digital program automatic temp display adjuster
- CA sheath sensor
- Flicker lamp, warning buzzer
- Circuit protector
- Motor protector thermal relay
- Amperemeter
- Display lamp with names
- No contact point relay
- Door open/close fan stop/start mechanism
- Event switch (option)
- Automatic temp recorder chart width 100mm 6 points 0~600°C graduation
- Sensor-3 (one of them is used as a temp adjuster as well)
- Terminal holes for measurements, 3 locations at the backside center both lower and upper.



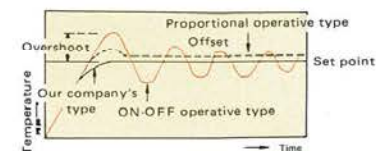
A micro computer is used in the temp control system

It enables wide functions and easy programs

The program temp adjuster developed with our best technologies, is a micro computer operated compact controller with a number of unique features. It remembers the desired program pattern and automatically operate the machine. It also has a heater break warning and fan stop warning and abnormal temp rise warning.

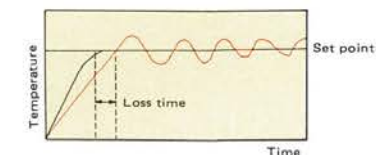
Auto tuning

The PID control, which is another unique development of our technology, enables the micro computer to read the temp rising curb and set the P band, I time and D time. The auto-tuning sets the best values for all these settings.



Anti-wind up circuit prevents overshoots

The anti-wind up prevents overshoots. The power heat mechanism has shortened the operating hours. We have been able to shorten the temp rising time. After reaching the set temp, it will keep the balanced conditions.



Easy programming operation

The soft-tough key in operation. The desired pattern will be input into the computer. Just press the START KEY button. The machine will start an automatic operation.

Easy setting because of a large capacity memory mechanism

The program can be set up to 16 steps. 1 step can be set up to 9999 minutes. The program pattern can be repeated 99 times. At the end of each step, a one second buzzer will notify the end of the step.



The program is intact even at a power failure time

The RAM backup condenser protects the memory 48 hours. You do not have to set it again after the power failure.

HYPR 60/80/100 Series

Automatic operation of 9 programmed patterns

This is the highest class of the high temp series equipped with the latest digital program controller. The micro-processor based controller remembers max. 9 patterns and runs an automatic operation at the best course in accordance with the operation conditions and the heater capacity.

Standard control attachments

- Digital program controller — 9 program pattern memory, 99 segment patterns, PID power adjusting.
- Double sheath CA heater
- 3-phase thyristor power adjuster with a heater adjusting volume
- Beam light power switch
- 2-circuit over-heat prevention device with a flicker display reset button
- Abnormal signal buzzer
- Circuit protector, high speed
- Amperemeter (with CT)
- Electric circuit breaker
- High temp heater unit
- Automatic temp recorder (chart width 100%) 6-point method 0-600°C display CA
- Sensor x 3 (one of them for temp adjuster combined)
- Measurement terminal hole (with fixed flange) Back side center up/down 2 locations and 1 location on the panel

Easy input from the key

The programs can be input very easily from the front key board with the specialized 18 keys. In addition, three sets of PID value and output remitter value can be set for each operation and the best selection can be made to fit the operation condition.

State display function

- **RDY** / It is ready and the operation is stopped when the lamp lights.
- **RUN** / It lights when the meters are in operation.
- **HLD** / It lights when the program time is at a halt during operation.
- **VRFY** / It lights when confirming the program.
- **CYC** / It lights at a time of cycle setting and cycle operation.
- **MAN** / It lights when a manual operation is under way.
- **REM** / It lights when controls are under way by outer signals. (RUN, HOLD, RESET)
- **GS** / It lights when setting a guarantee soak or when it is in operation.
- **PROG** / It lights when program is being set or program No. is selected.
- **EV** / It lights when an even is being set or when it is in operation.
- **BAT** / It lights when it is required to change the memory protection battery.

Major key functions

- PROG** Selection of program number
- PROG** Programming in progress (Push at the same time)
- CLR PROG** Erase programmed data
- VRFY** Confirm the patterns after completing programming

Large capacity memory

Memory of 9-program pattern, 99 segment/pattern



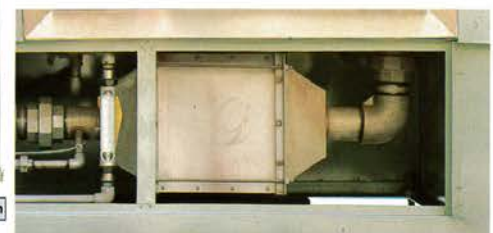
Easy-operate key board system

- DISP** Shift of SP value/output value recovery to operation display from VRFY/PID/PARA MODES.
- AUTO/MAN** Balanceless bumpless automatic/manual shift switch
- SEG** Start/segment call from the pattern
- PARA** Setting of output remitter HIGH/LOW and programmable range etc.
- PID** PIC value setting and confirmation
- EVENT** TIME/PV/DEV setting

Satisfactory option attachments

- Exhaustion Blower
- Out air intake heat air producer
- Intake/exhaustion auto damper
- Door open/close signal circuit

The HPR series has got a number of optional devices that suits the high grade model. The automatic in-out blower device (option) can control the outer air within the set pattern by using a heat air producer (option), and it makes a precision temp control at temp lowering time possible. The door open/close signal circuit is very effective when the door needs to be open and shut frequently.



Heater unit
High efficiency and energy-saving type to put down the electric consumption. Large out-put have no choice on the material and quantity.



Syloco Fan
No irregularity in current and superior in temperature contribution and designed to fill with hot-wind all over.



Door
It is well designed for enclosed door not let the hot wind lose. This is the easy operate the full open type.

Easy program operation

TIME event 6 points. PV event 2 points. DEV event 2 points (see chart). TIME 3 points. PV 2 points. DEV 2 points (option). Each segment have been given a even setting (see chart). Each TIME, PV & DEV event.
Events can be set by operation the front side keys. The same event # can be used multiple times (chart). TIME, EV #1, PV EV #8, DEV EV #9. Event output, oven collector transfer output.

Programmable PID output remitter

3 set max. each for PID value and output remitter is possible for selection (#1-#9 patterns are in common)
3 sets each of PID value and output remitter by the segment can be selected. By operating the front key board, setting can be conducted by reading digital values.

Programmable guarantee soak

Guarantee soak: Equal heat preservation
Selection is available for segments to conduct programmable guarantee soak. (See chart - guarantee soak 5, 9 segment). The guarantee temp range is $\pm 1^\circ\text{C}$ or $\pm 5^\circ\text{C}$ to be selected. By operating the inside switch the guarantee soak can be set or dis-set.

Atmospheric change. Acid-less atmosphere oven

It is tight enough to be able to conduct a heat treatment, drying and temperature testing in the nitrogen gas or carbon gas and other inactive gas. It can also preserve under a very low moisture condition after the treatment because it is equipped with a gas flow meter and flow adjusting valve etc.

Small signals. Precision temp control

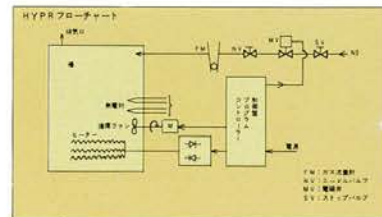
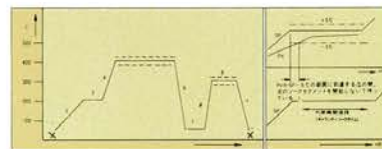
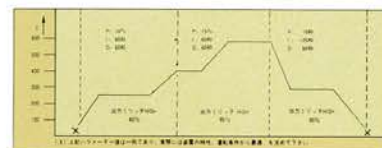
The powerful thyristor regulator has a characteristics of controlling a large scale power with a small signal. Therefore it can always operate on the most appropriate temperature no matter what quality or quantity the work is. The output voltage can be adjusted.

Control performance of the thyristor is great

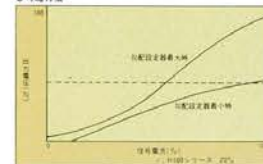
The H series power adjusting unit is a no-contact-point adjuster which has a great difference from a magnetic opener or conductive voltage adjuster with a movable contact point. It performs a very accurate temp control.

SPECIFICATIONS

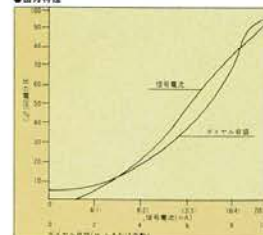
Input voltage-3 phase 200V-220V/Frequency 50Hz or 60Hz/
Ampere 120A/Control power AC200V-220V 25VA (if with a fan, 150A)/Surrounding temp 0-50°C (Humidity less than 90%)/
Preservation temp -5 - +70°C/Operation load, resistance load, conductive load (transformer first control except for 25A) Control input 1. ON-OFF contact point (H - L)/2. Ampere input signal 1 - 5mA (1.5 k Ω), 4 - 20mA (390 Ω)/Other ampere input signal adjuster/Out adjusting range 10-96%/Slant setting range 20-96% (Ampere input signal max time)/Warning circuit 1. Over ampere-warning circuit, overheat warning circuit, overload break warning circuit, break fuse warning circuit/Start method - Soft start method Cooling method - Air cooling/Insulation resistance more than 20M (DC500V mega)



● 温度特性



● 出力特性



Jet Line

Jet-line • Small type distant infrared continual heating apparatus 200°C MAX.

JET-LINE J-300

It is a new machine completely renewing the conventional thermal treatment concept.

This new machine — Jetline is an absolutely new type of machine free from the hitherto image of permanent temperature oven. This has been created as a result of our composite technology of our technical staff at ASAHI KAGAKU who developed conveyor ovens for thermal plant treatment. The epoch-making combination of a ceramic ultra-red heater and a cargo conveyor has enabled the line-treatment efficiently and speedily and burn-drying after painting and after marking of semiconductors and resistors. The Jetline has two types: J-300 with belt width 300mm and inner-chamber length 700mm, and J-550 with belt width 550mm and inner-chamber length 1500mm. Both J-300 and J-550 can move the heater up and down by 50mm, which make it possible to adjust according to the size of the work.

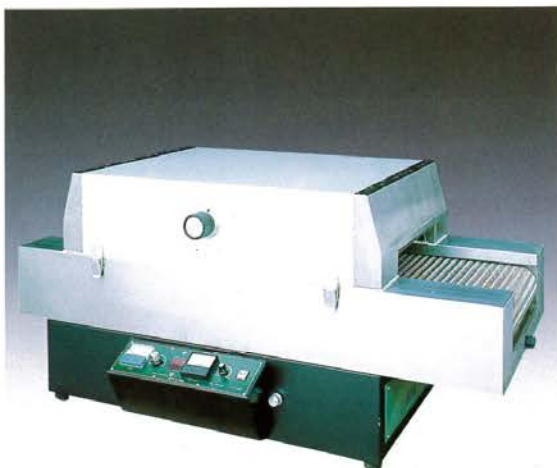
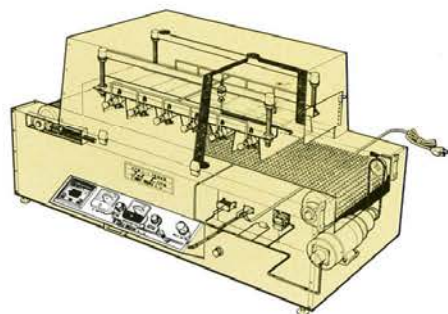
Standard control Attachments

- Power source 200 V, 2 P, 15 A
- Chamber temp display 0—200°C indication CA
- Heater remote ultra-red ceramic heater
- Capacity 200 V·450W x 5 2.1 KW
- Indication Power source-white, belt transmission-green, amperemeter 15 A
- Overheat protection Digital automatic temp adjusting meter (Optional exhaust blower and terminals attached)
- Circuit protector
- Temp adjuster Thyristor voltage adjuster x 2

Capable for use as a manufacturing plant

The Jetline supplied with multi-purpose utilities is fit for a small laboratory plant to a large manufacturing plant and is useful for almost all the practical purposes.

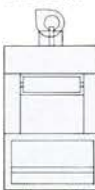
- Post-painting burn-drying
- All resins and curing sub-heat softening
- Drying after marking semiconductors and resistors
- Drying curing of all printing material
- Drying of coating painting of wood boards
- Drying of printed board circuit
- Flow oven for soldering



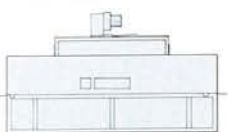
TOP VIEW



SIDE VIEW



FRONT VIEW



DIMENSIONS (mm)

Belt Width	Stage Entrance	Stage Exit	Drum DIA	Drum	Inner Chamber Width	Length
300	250	150	75	310	430	700
Chamber Entrance Height	Chamber Width	Chamber Length	Height	Total H	Up-down Adjustment Width	Heater
80	500	1300	180	550	50	410

SPECIFICATIONS

Belt Stage	W300 x L1200mm	Inner Chamber Dimension	W430 x L700 x H80mm
Belt Material	Entrance 250-Exit 150mm Stainless net SUS304	Inner Material	W500 x L1200 x H550mm Stainless SUS304
Drum DIA	50g DRUM	Outer Material	Stainless SUS304 Hairline Finish
Tension	Automatic	Transmission	Sprocket Chains
Trans Motor	40 W Speed Variable	Angle Adjust	Adjuster Up-down 50mm
Passage Time	Gear-Free Trans 2-10min/700mm	Falling Prevention	Slide Shutter Up-down 80mm
R.P.M	0—2000 With Tachometer	Weight	Stainless Bar 80KG
		Legs	Rubber

JET-LINE J-550

It is a general purpose machine capable of continuous treatment of a large work

This is a small-size continuous remote ultra-red conveyor oven equipped with an entrance stage for steady and smooth operations to treat large works, in addition to the large dimension of belt width 550mm and heater 1,500mm. It is also equipped with the base structure and casters so that it could be used anywhere and everywhere.

Standard control attachments

- Power source 200V·2P·50A
- Chamber temp display 0—200°C indication CA
- Heater Remote ultra-red ceramic heater
- Capacity 200V·500W x 14 7KW
- Display Power source-white, belt transmission-green, amperemeter-50C with ACT
- Overheat protection Digital automatic temp adjuster (Optional exhaust blower with terminals)
- Circuit protection circuit protector
- Temp adjuster Thyristor voltage adjuster x 2

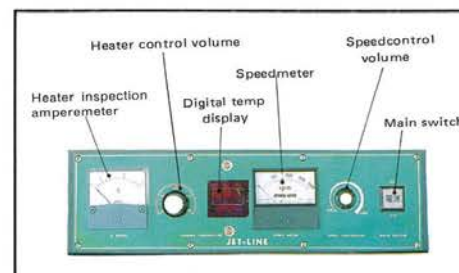
The remote ultra-red heater is ideal for curing of all sort of works

The jetline despite its light-weight and compactness has a high caliber which almost equals that of a large machine. The secret is in the remote ultra-red heat used as a heat source. The ultra-red beamed from the heater works directly on the work and quickly dries it which would be difficult if it is to be done by the normal thermal drying. The beaming distance adjusting is rather easy. The heating surface temp adjustment can be controlled perfectly by the stageless thyristor.

The conveyor system enables the adjustment of the transportation speed.



This transportation conveyor makes the remote ultra-red heater more efficient. The transportation speed can be adjusted from stop to 4 minutes, and the best beaming time can be chosen depending on the material and size of the work. The speedometer is attached as a standard equipment. Easy to operate.



Standard preparatory articles

- Entrance slicer
- Blower to arrange temperature



Option

- Upper and lower adjustment structure for HEATER.
- Output shooter (with angle control)
- J-300 special stand (Caster with stoppers)



DIMENSIONS (mm)

Belt Width	Stage Entrance	Stage Exit	Drum DIA	Drum	Inner Chamber Width	Inner Chamber Length
550	550	550	100	560	680	1500
Chamber Entrance/EXIT Height	Chamber Width	Chamber Length	Height	Total Height	Up-down Adjustment Width	Heater
80	750	2600	180	550	50	660

SPECIFICATIONS

Belt Stage	W550 x L2600mm	Inner Chamber Total Dimension	W680 x L1500 x H80mm
Belt Material	Entrance 550-Exit 550mm Stainless net SUS304	Inner Chamber Material	W750 x L2600 x H550mm Stainless SUS304
Drum	50g DRUM	Outer Chamber Material	Stainless SUS304 Hairline Finish
Tension	Stretch Frame Spring Installed	Transmission	Sprocket Chains
Trans Motor	100 W Speed Variable	Heating Area Adjust	Adjuster Up-down 50mm
Passage Time	NO Gear Transmission (2-10min/1500mm)	Falling Prevention	Slide Shutter Up-down 80g
R.P.M	0—2000 RPM With Tachometer	Weight	Stainless Bar 200KG

Dry-Z Oven Series

Dry-Z oven series ● Heat blow permanent temperature oven 200°C max

DZ 30/50 Oven

Equal temperature distribution from corner to corner: DZ-30 and DZ-50

The new dry ovens DZ30 and 50 are completely different from the conventional system. This is a table-type precision heat blow permanent temp oven unique with our latest technologies. By the heat blow, the temperature in the chamber will be maintained equally. This oven will no doubt show its superb temperature distribution capability. The stainless sheath heater will make the temperature rise to the set temperature, which minimizes the time loss.

DZ-30 Standard attachments DZ-50 Standard attachments

- Power source 100V·10A
- Heater U-shape stainless sheath
- Range switch Low 450W High 90W
- Display lamp Power-white, heater-red
- Timer 30H-3H-30M-3M
- Buzzer Continuous sound with volume switch
- Motor 40W condenser motor
- Fan 125mmφ pressure fan
- Circuit protector
- Back-side exhaust cap
- Chamber corners R-treated
- Power source 100V·20A
- Heater U-shape stainless sheath
- Range switch Manual thyristor 0-100%
- Max 1.8
- Display lamp Power-white, heater-red abnormal-yellow
- Timer 3M-30M-3H-30H
- Buzzer 40W condenser motor
- Fan 150mmφ pressure fan
- Circuit breaker
- Back-side exhaust cap
- Chamber corners R-treated
- Warning circuit
- Solid state relay



The standards attachments are gorgeously satisfactory

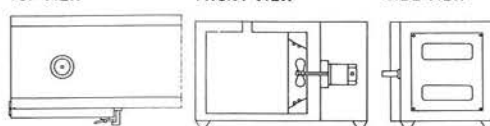


DZ-30 and DZ-50 have got as their standard attachments, a round-shape bi-metal temp display which the in-chamber temperature precisely, a digital temp display and adjuster, SSR no-contact point relay (noiseless solid state relay) and a flicker lighting push button switch, in addition to the handy multi-timer.

TOP VIEW

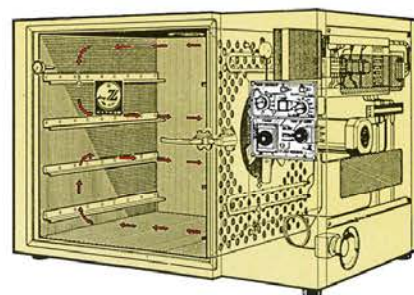
FRONT VIEW

SIDE VIEW



DIMENSIONS (mm)

Dry oven	Width	Length	Height	Distributor	Fan-side Temp Maintenance	Fan-side Air Pipe	Left side Temp Maintenance	Outer Width
DZ-30	300	300	300	130	40	70	40	590
DZ-50	500	500	500	130	40	70	40	790
	Back side Temp Maintenance	Outer Length	Ceiling Temp Maintenance	Bottom Temp Maintenance	Shelf Pitch	Exhaust Pipe DIA	Rubber Legs	
DZ-30	40	375	40	40	85	35	30φ	
DZ-50	40	770	40	40	110	45	45φ	



DZ-30 Oven

A high Caliber machine in a small body.

This is a table-type permanent temp oven compactly incorporating all the essential elements required of a permanent temp oven. It has got the latest systems such as the heat blow blending circulation system. It is in its own class in the capability of cost performance.



The capabilities are as good as of a large oven.

We are proud of the high performance machine with an easy-to-see and precise round bimetal temp display meter, a multi-timer, a buzzer and a high sensitive circuit protector.

DZ-30 PANEL

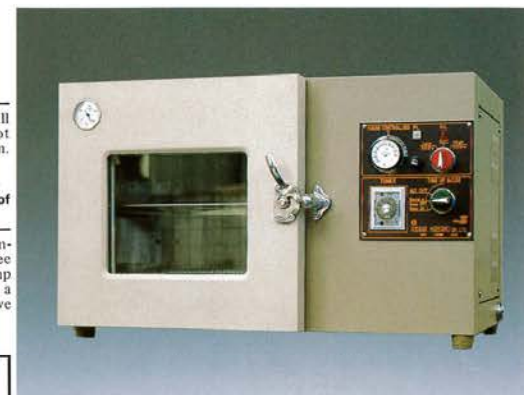


- Power source lamp (white)
- Heating lamp (red)
- Heater switch (low and high)
- Liquid expansion automatic temp adjuster 0-220°C
- All off mode
- Timer cut buzzer off mode
- Buzzer on mode
- Multi timer 30H-3M
- Up-down adjustment

SPECIFICATIONS

Inner dimension	W300 x D300 x H300	Weight resistance	10 KG per a shelf
Outer dimension	W590 x D490 x H420	Temp indication	0-200°C
Total weight	35KG	Temp adjustment	Liquid expansion
Inner chamber material	SUS-304	Temp display	Round bimetal
Outer chamber	Steel	Temp distribution	2.0%
Painting	Plating	Temp rise time	100°C-20M
Color	Bl color	Capacity	0.3KW-1 + 0.6KW-1
Shelves	Free 3 shelves		

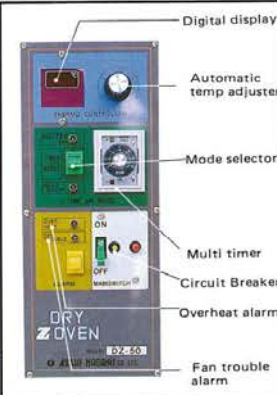
● ATTACHMENTS: Power source wire, and a vinyl cover. Shelf nets available separately.



DZ-50 Oven

Space saving high performance machine.

The Dry Z-oven with its largest capacity dry oven in this class in its space saving small body, has a multiple use from laboratory to manufacturing plant.



Easy operation and safety mechanisms have been improved.

The DZ-50 has realized a supreme precision and safety in addition to its easy operation by the combination of an LED digital high caliber temp display adjusting meter. The digital display will make you easy to set the temperature and prevent any mistakes of wrong reading of the figures. Also a multi-functional mode selector is attached as a standard equipment.

SPECIFICATIONS

Inner dimension	W500 x D500 x H500mm	Temp indication	0-200°C
Outer dimension	W750 x D570 x H650mm	Temp adjustment	Digital temp display adjusting meter
Total weight	55KG	Temp display	Round bimetal
Inner chamber material	SUS-304	Temp precision	Full scale 1.0%
Outer chamber material	Steel	Temp distribution	2.0%
Painting	Plating	Temp rise time	100°C-20M
Color	Bl color	Capacity	1.2KW-1 + 0.6KW-1
Shelves	Free 4 shelves	Over heat prevention	Liquid expansion reset button attached
Weight resistance	10KG per shelf		

● Attachments: A power source wire 3m. Self nets are separately available.



DP Dry Plant Chamber

Dry Plant Chamber • Ground wheel heat blow circulation permanent temp. chamber 200°C max

DP-88

- C Cushions attached
- Ground wheel/shelf net convertible

This has a treatment capacity undreamed of before.

D88 series is an epochmaking permanent temp chamber for a medium sized chamber because it has a ground wheel and shelf composite mechanism which is normally used for a large size oven. The work can be transported easily. Heat blow treatment can be done while the oven is on the wheel, which makes its treatment capacity greater than ever. It can perform a fast continuous operation. It can be set or installed anywhere because the outer dimension is smaller than a larger machine. It is effective for all sorts of use such as a small production, a large production, laboratory or testing.

F Standard control attachment

- Digital temp display adjuster PID control
- Sensor CA sensor
- Heater switch low-high
- Heater capacity display amperemeter 30A
- Overheat prevention Dialing setting 50-300°C
- Abnormal display Lighting flicker display Intermittent buzzer circuit
- Digital quartz timer, 0.01 second ~ 99 hours 99 minute (3 selections)
- Power source switch Circuit breaker Lighting bush button switch
- Circuit protector Motor thermal relay
- No contact point relay
- Heater outer wire

D Series standard attachments

- Inner chamber Stainless SUS304
- Outer chamber Heat contact material SUS304 (others are steel)
- Air flow adjuster Up-middle-down 3 way distribution
- Packing Silicon packing
- Heat Insulating material Blanket 15mm T
- Painting plating
- Color Body-brownish Bl colors

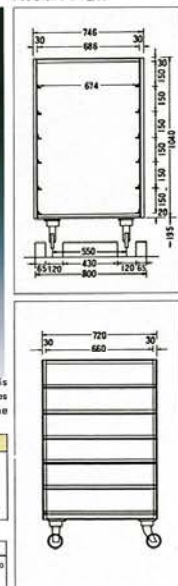


TR-88, a wheeled base for D series, is made of stainless SUS-304, which makes it possible to put many works at a time smoothly in the chamber.

TR-88	SPECIFICATIONS
Outer dimensions	W688 x D720 x H240 mm
Shelves	Free 18 shelves
Shelf holders	Wheeled base shelf holders x 6
Casters	Variable and fixed casters, 2 pieces each 150kg

D series stainless shelf nets	Model	AN TR-88	AN-80	NS-80
Dimensions mm	W670 x D705	W785 x D730	W785 x D730	W785 x D730
Weight resistance	40KG	80KG	80KG	10KG

TRUCK VIEW



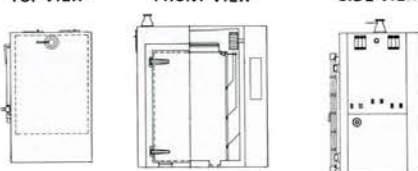
Perfect safety and reliability

It has as its standard attachments, overheat prevention device which protects the work from an unexpected abnormality of high temperature, a single-phased operation prevention device, an operation circuit and a circuit protector plus the digital PID control of temperature. We have also fixed a circuit breaker in the main switch. All these features will improve safety and reliability.

TOP VIEW

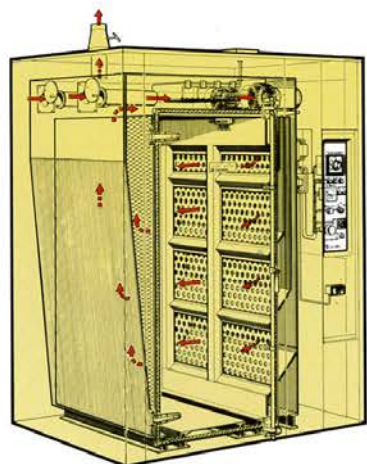
FRONT VIEW

SIDE VIEW



SPECIFICATIONS

D series	D-88
Inner dimensions	W600 x D600 x H1200mm
Outer dimensions	W1500 x D970 x H1590mm
Total weight	350KG
Max temp	200V - 3P - 30A 190°C
Power capacity	Stainless shield heater 9KW (1.5KW x 6) outer terminal
Heater capacity	Circuit breaker 30A
Main switch	Stainless sirocco fan 178 x 2
Fan	3-phased 200V - 0.4KW x 2
Motor	Single door
Door	25-gear latch
Door fixture	Free 9 shelves
Shelves	40KG per shelf (total resistance 200KG)
Shelf resistance	Optional
Shelf holders	Out 80mm
Exhaust diameter	Prody 50-320°C
Over-ride PR vention	550mm
Wheeled base trench	



Dry Thermos

Dry Thermos • Table-type electric temperature keeper 200°C max.

DM30 Dry Thermos

• Electric temperature keeper

This is a natural convection current electric temperature keeper for general uses.

The dry thermos is an electric temperature keeper in which an out-wire connected long life shield heater is attached to the heating part at the bottom which keeps the chamber temperature at a fixed level without loss or overload by the convection current. As the mechanism is so simple, you do not require any particular operational training. This is for anybody's use for any purpose. The dry thermos has two types: DM-30 with inner dimension 300mm angle and DM-50 with 500mm angle. Both work on single phase 100V, which makes it very easy to relocate the machine. It can be installed any place.

Standard control attachments

- Temp adjuster Thermistor automatic temp adjuster 0-200°C
- Temp display Bimetal round display
- Heater control Thyristor power adjuster (Heater adjusting volume attached)
- Multi timer 3M-30H 4 selections
- Buzzer Continuous volume adjustable
- Mode switch Off circuit buzzer circuit timer cut
- Display White, red, green
- Circuit breaker 2P-30mA test button attached
- DM-30 Liquid expansion temp adjuster and magnet switch

Standard attachments

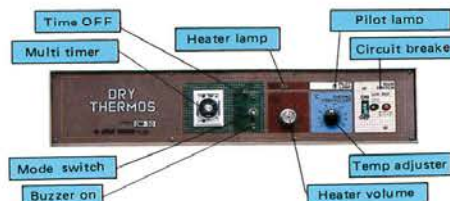
- Inner chamber Stainless SUS-304
- Outer material Steel
- Door Single door window 170 x 200mm
- Shelves Free hanger style
- Shelf nets Stainless SUS-304 x 2
- Packing Silicon
- Insulating material Bulk and glass wool
- Door fixture Handy handle
- Painting Lazer plating
- Color Ivory-Brown Bl-color
- Chamber corners R-treated



Perfectly satisfactory mechanism



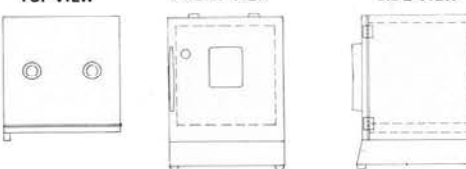
The dry thermos series has been designed to achieve handy operation and energy saving, and has a high caliber that equals that of a high class machine. It has got a bimetal round display at the temperature display panel, a thermistor automatic temp adjuster at the adjusting panel, a no-contact-point relay, buzzer multi timer, etc. A special insulating material is used between the two-fold walls which keeps the influence from the outer temperature. This is an ideal stable temperature drying oven.



TOP VIEW

FRONT VIEW

SIDE VIEW



DIMENSIONS (mm)

Dry Thermos	Width	Length	Height	Distributor	Left-right Temp maintenance	Outer Width	Back side Temp maintenance	Front Temp maintenance
DM-30	300	300	300	105	40	290	40	45
DM-50	500	500	500	130	40	490	40	45
	Outer Length	Outer Temp maintenance	Bottom Temp maintenance	Lower Part Temp maintenance	Shelf Pitch	Exhaust DIA	Outer Height	
DM-30	18K	45	35	50	Free	60	555	
DM-50	585	40	30	50	Free	80 x 2	780	

SPECIFICATIONS

	DM-30	DM-50
Inner dimensions	W200 x D300 x H300mm	W380 x D400 x H300mm
Outer dimensions	W380 x D400 x H300mm	W580 x D600 x H300mm
Power source	100V Single phase 10A	100V Single phase 20A
Heat source	SUS-304 Shield heater 900W	SUS-304 Shield heater 1.5W Outer connection
Exhaust	Stainless 60mm Single location	Stainless 60mm 2 locations
Max temp	200°C Max	200°C Max
Weight	25KG	50KG

Thermal-pass Chamber

Thermal-pass Chamber ● Precision large sterilizer 300°C max

TMR Series

An almighty type for heating, sterilizing and cooling

The thermal pass chamber TMR is a fully automatic large scale almighty ground wheel drying machine which performs heat blow drying, dry sterilizing and cooled preservation in one cycle. The work can be transported in and out on the tray rack. Front and back doors are used so that the work can be sent from the cleaning chamber to the germ-free chamber.

Standard control attachments

- Program temp adjuster. Digital setting max 399°C with micro computer
- Sensor shield CA double
- Heater control solid state relay
- Heater capacity display
- Amperemeter CT attached
- Over heat prevention device 0-300°C
- Abnormal display. Flicker display intermittent sound, buzzer circuit
- Cycle timer. Multi timer x 2 buzzer, 30H-3M 4 selections
- Power switch. Circuit breaker lamp power switch
- Circuit protector. Motor thermal relay
- Door open closed indicator
- Blower and circulation fan stop circuit, patlight 2, limit switch
- Blower switch. Lamp push button switch (auto damper combination)

Standard attachments

- Temp recorder. Chart width 100mm 6 point recording 0-300°C 3-location recording
- Outer material SUS-304 hair-line finish
- Inner chamber SUS-304 BA finish
- Door cleaning chamber and germ-free chamber both single doors
- Inside processed finish. Argon welding finish and silicon compound inner chamber washable
- Packing. Silicon packing
- Insulating material. Super wool mat ceramic fiber
- Door fixture. 32φ gear latch large size
- Air flow adjuster. Up-middle-down 3 way distribution with stopper
- Transmission. Belt transmission
- Shaft. SUS-304 40φmm reverse screw key trench



Temperature range RT + 50°C — +300°C MAX

- There is a door at the front and back of the dry heat sterilizing chamber.
- Temperature setting is done digitally with greater precision. The sterilizing timer and cooling timer can be set from 3M-30M-3H-30H. Four selections.
- The inner and outer material of the chamber of stainless SUS-304. It can be washed with water.



FRONT VIEW



SIDE VIEW

- Intake heat blower (Left photo)
- Automatic open/close exhaust blower (Right photo)

SPECIFICATIONS

Thermal pass Chamber	TMR - 80	TMR - 110
Inner dimensions	W800 x D1050 x H1500mm	W1100 x D1200 x H1500mm
Outer dimensions	W1760 x D1300 x H2050mm	W2060 x D1350 x H2050mm
Power source	200V-3P-100A	200V-3P-150A
Heat source	Space heater SUS-304 21KW	Space heater SUS-304 36KW
Circulation fan	230φmm Sirococo fan (2) SUS-304	230φmm Sirococo fan (4) SUS-304
Inhale blower	Absolute filter (1)	Absolute filter (2)
Exhaust	Auto damper adjust one location	Auto damper adjust two locations
Motor	200V-3 phase-4P-0.75KW (2)	200V-3 phase-4P-0.75KW (4)
Wheel base	Outer base (2) inner base (2) SUS-304	Outer base (4) inner base (4) SUS-304
Max	250°C	260°C

Clean Oven Series

Clean Oven Series ● Benchd dust-free permanent temp. chamber 300°C max

CL Series

We are making an artificial cleaning environment under all conditions

The CL series is a dust-free permanent temperature chamber that has cleared the world's most authoritative US STANDARD No. 209b = class 100. This can make a cleaning environment under any condition by using a high precision filter and the air-tight chamber structure. The ceramic fiber glass mat is used as the insulating material. As a result the high efficiency of the insulating material, we have been able to save the electric power by 20%. The temp setting mechanism, which is the most crucial brain for a permanent temp chamber, is provided with an automatic temp display adjuster which is controlled proportionate to time, as a standard attachment.

Standard control attachments

- Programmed temp adjuster. Display MAX 399°C with micro-computer and PID power adjuster
- Sensor. Shield CA double
- Heater control. Solid state relay
- Heater capacity display
- Over heat prevention device 0-300°C
- Abnormal display. Flicker display intermittent buzzer circuit
- Power switch. Circuit breaker lamp power button switch
- Circuit protector (high speed) Motor thermal relay

Standard attachments

- Inner chamber SUS-304 BA finish
- Outer chamber. Front heat contacting part SUS-304 other parts steel
- Door. Single door
- Packing. Silicon packing
- Insulating material. Ceramic fiber bulk fiber
- Fan shaft. SUS-304 40φmm reverse screw key ditch
- Shelf net. SUS-304 NS (2)
- Painting. Hampterton plating
- Color. Brown and Ivory
- Caster. Free director 100φmm with stopper



Cleanliness is class 100 and perfect safety

- A special filter and an air-tight inner chamber structure.
- A ceramic fiber glass mat for insulating material.
- A temperature over-rise prevention device as safety mechanism. In case of an abnormal temp rise, the heat circuit will be shut and the inner chamber temperature will start reducing.
- The timer can be selected in four ways: 3 minutes-30 minutes-3 hours-30 hours

The absolute filter will remove all the particles

The absolute filter was developed and used by the American Atomic Power Committee for the purpose of removing radioactive dusts. Now this is open for general use including the nuclear related organizations in such places where dust-free or germ-free circumstances are desired. Each filter must pass a laboratory test called DOP, and the result is indicated on the filter. Dust removal of more than 99.97% is assured. The absolute filter is a positive filter. Therefore, it is designed not to remit the collected dust.

● Features

1. Will remove all particles such as bacteria and mildews.
2. Can be used for 9000-20000 hours. Economical.
3. Is free of maintenance cost.
4. Has superior heat resistance, humidity resistance and acid resistance. It can be used for all sorts of air cleaning. It can be used, for instance, for excessively damp air or high temperature air or a pressurized air.

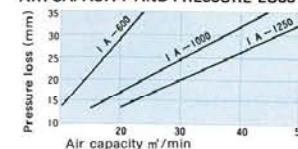
SPECIFICATIONS

	CL - I	CL - II
Clean oven	W600 x D600 x H600	W600 x D800 x H900
Inner dimensions	W800 x D1550 x H1450	W800 x D1750 x H1750
Outer dimensions	200V-3P-100A	200V-3P-100A
Power source	Space heater SUS-304 4KW	Space heater SUS-304 6KW
Heat source	270φ Sirococo fan SUS-304	270φ Sirococo fan SUS-304
Circulation fan	200V-3 phase-4P-1.5KW	200V-3 phase-4P-1.5KW
Motor	4 Shelves	5 Shelves
Shelves	SUS-304 25φ	SUS-304 25φ
Exhaust damper	MAX 299°C	MAX 299°C
Max temp	Class 100 (US standard No. 209b)	Class 100 (US standard No. 209b)
Cleanliness	Large scale. Up-down touch-to-work	Large scale. Up-down touch-to-work
Door fixture	Up-down 2-way distribution	Up-down 2-way distribution
Air flow adjust		

SPECIFICATIONS

Material: Waterproof Gass fiber/Separator Aluminium/Packing material; Ceramic/Outer frame: SUS outer frame/Finish: NITL/Max. temp: 350°C/MAX humidity: 100%/Pressure loss: 25.4mm When it is new and 50.8mm when a replacement is necessary

AIR CAPACITY AND PRESSURE LOSS OF ABSOLUTE FILTER



Bench Separator from outside air



Absolute filter



Pressure gauge (Filter control)

Thermal Treatment Equipment

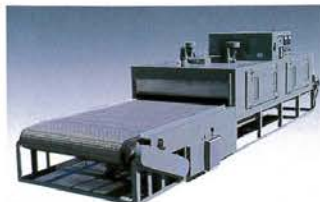
● A wide range of line to response to all the needs

CONVEYER SERIES

Heat air circulation conveyor oven

It has an independent temperature control system for each zone. It has a high capability and safety by adopting a temperature distributor, a high-caliber heater unit and an inspection door. It is most suitable for an automatic operation with least power for electric part insulation, thermal hardening of the stabilizer and the semi-conductor and metal baking.

Temperature	MAX 200°C, 400°C, 600°C
Conveyor width	100mm - 2000mm
Chamber height	200mm - 1000mm
Chamber length	100mm - 20M
Chamber material	Stainless SUS-304
Conveyor type	Stainless net belt, continuous bar transmission Interval transmission, speed changeable



2-Shelved continuous dry chamber

This equipment has been developed for drying plated printed boards. It has a 2-shelved transportation conveyor. Its treatment capacity has been up-graded. At a request we can manufacture 3-shelved or 4-shelved chambers.



WHEEL-BASED LB-TB SERIES

Heat air circulation wheel based dryer

It is capable of treating a large quantity of work without causing a disturbed temperature distribution or drying time after putting the work in the chamber from the wheeled base. The LB and TB types are very efficient in their circulation and air flow powers and are useful for drying powders.



SPECIFICATIONS	
Inner dimensions	100W x 1000 x 150H CM - 200W x 2000 x 200H CM 56 standard types
Temperature	200°C, 300°C MAX
Temp adjust	Automatic temp display adjuster
Inner material	Stainless SUS-304
Power source	AC 200V 3P

AUTO HATCH TYPE

Up-down open-close dryer

It is a large size dryer designed to require a small space. It is attachable to any machine. It is easy and smooth to open and close. Both automatic and manual types are of safety mechanism.



KKT SERIES

Precision low temp permanent temp & moisture chamber

This is a permanent temp and moisture chamber equipped with a moisture control mechanism and a wide range of temperatures from low to high. It is a power saving machine with the latest freeze compressor, highly efficient heat exchanger and a high quality insulating material. It is low-priced and the latest machine.



	Temp Range	Inner dimensions W x D x H
0-type	0°C - +80°C	600 x 600 x 600
1-type	-20°C - +80°C	800 x 800 x 800
2-type	-40°C - +80°C	1000 x 1000 x 1000

AKT SERIES

Precision low temp device

The door is as wide as the effective dimensions of the inner chamber, which makes easier to put in and out a large product. Quick transportation by using the attached wheels. It has its own circulation and other units. Capable of a programmed operation.



	Temp range	Inner dimensions W x D x H
0	0 - +80°C	600 x 600 x 600
-20	-20 - +80°C	800 x 800 x 800
-40	-40 - +80°C	1000 x 1000 x 1000

UL SERIES

Ultra low temp permanent temp chamber

By the adoption of a two-sourced freezing system and a back-gas cooling heat exchanger, a quick cooling and quick heating program operation is possible. It can be used for various standard tests and for ultra low-temp storage of a large quantity.

	Temp range	Inner dimensions W x D x H
-80°C	-80°C - +180°C	600 x 600 x 600
		800 x 800 x 800
		1000 x 1000 x 1000

