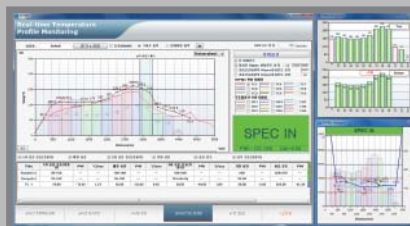


www.tsms.kr

REFLOW

TSM *ECONOLOGY*

Please experience the next generation reflow which takes measures effectively against the CO₂ regulation, which has been further upgraded through the addition of full line-up of N₂ gas system supplying high purity and low dew point N₂ gas stably by realizing the lowest power and N₂ consumption.



TSM Co., Ltd.



Please scan the QR code using a smart phone.

Reflow

Full Line-up

System



Twin Reflow
TVs / Computers / Mobile Phones / LEDs / BLUs / Set-top Boxes / Electrical and Electronic Equipment for Automobiles / Medical Appliances, etc.



Dual Reflow
TVs / Computers / Mobile Phones / LEDs / BLUs / Set-top Boxes / Electrical and Electronic Equipment for Automobiles / Medical Appliances, etc.



Compact / Slim Reflow
Flip Chips / BGAs / Pre-flux, etc.



LED / BLU Reflow
Large LEDs / BLUs / Lighting / Large Test Boards / TVs



TRA Reflow
TVs / Computers / LEDs / BLUs / Set-top Boxes / Electrical and Electronic Equipment for Automobiles / Medical Appliances, etc.



Single-sided Reflow
Alternative Use for Wave Soldering Power Boards / Electrical and Electronic Equipment for Automobiles / Set-top Boxes, etc.



Vacuum Reflow
(Technical cooperation with ETC)
Power Devices, etc.



Semiconductor Reflow
Flip chip / Bonding Package



ES-Reflow
- Ultra power cost saving
- Outstanding thermal efficiency



TRN-Reflow
- Maximization of Heat Efficiency through Triple Heat Insulation
- Improved maintainability
- Flux suppression system
- Electrical and Electronic Equipment Containing Large Amount of Flux
- Improved Flux Recovery Function (2 times compared to the existing function)



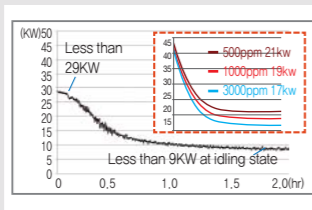
N₂ GENERATOR
Supplies high purity N₂ gas to the N₂ Reflow stably

Features of Reflow



Convenient Screen Configuration

Provides the convenience of user access and reading by splitting the MMI → RTPM → Rppm programs for the user interface into three screens on a wide monitor.



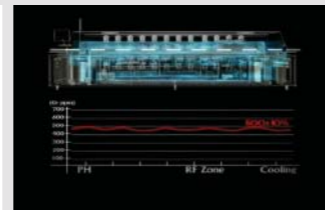
Energy Saving System

The user can innovatively save the power consumption compared to that of existing reflow equipment by upgrading the technology for uniform ppm control of entire zones which, something TSM is proud of. In addition, it is possible to perform automatic flow rate control according to the ppm setup.



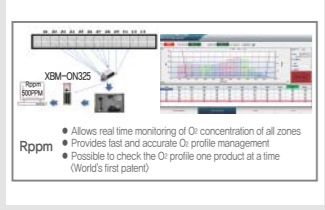
N₂ Flow Control System

The N₂ flow control method allows as much N₂ to be consumed as is needed to maintain the ppm inside the reflow oven. (In the case of existing O₂ flow control methods, energy loss occurs regardless of the set ppm by consuming N₂ quantitatively.)



O₂ Control System

Realizes highly accurate O₂ concentration through automatic control of the O₂ concentration. (Uniform control of entire zones)



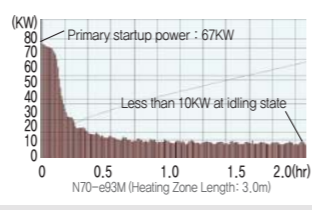
Rppm / Option

The real time O₂ concentration profile system, Rppm, provides the ppm information of each zone by measuring the purity of oxygen inside the oven in real time and maintains the N₂ atmosphere constantly by measuring it repeatedly.



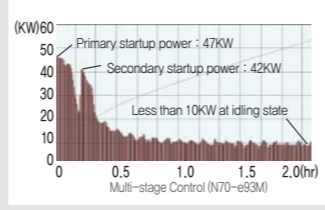
RTPM / Option

The real time temperature profile system, RTPM, which has evolved one step further provides a variety of information as well as a process index and chart data for the analysis of compatibility and process capability.



Power Consumption at Idling State

The N70-e series model, developed ourselves, reduces power consumption significantly compared to other existing systems.



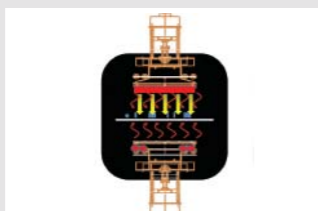
Partial Startup Mode

Minimizes the peak power consumption by controlling the heater temperature in two steps. It is possible to reduce the contract power capacity and save basic power costs.



Dual Conveyor / Option

Dual Lane (Option)
 - Increased productivity (Compared to existing single lane systems)
 - Maximized extendibility and convenience
 - applicable to the maximum width of a dual lane system: 400mm
 - Fixed axis to be arranged according to customers' needs → FMMF/ FMFM (F: fixed, M: movable)



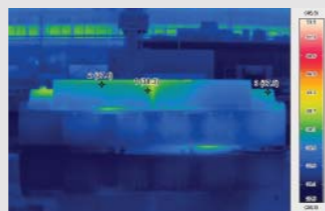
Special Heater / Option

The special panel heater developed by TSM exhibits outstanding thermal efficiency and profile reproducibility by utilizing the radiant heat and existing convection current generated from the panel itself.



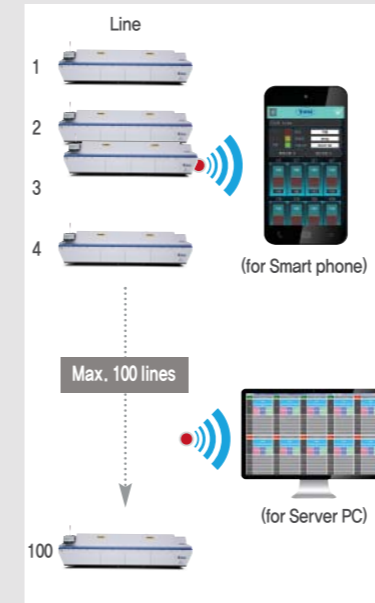
Built-in PSA / Option

Built-in PSAs interlocked with a reflow allow innovative use of space and provide users with a stable operation environment by performing precise PC control of large capacity PSAs supplying high purity nitrogen.



Surface Temperature

The reflow is insulated so that its surface temperature will have little influence on operators and the HVAC system, resulting in low power consumption.



TMS (TSM reflow Mobile / Server Monitoring Service) / option

It is possible to check the reflow operation status, operation mode, alarms and abnormal states, etc., in real time from a smart phone and server PC. (Max. 100 lines)



FMS(Flux Management System)

- Exhibits highly efficient flux recovery and reduces contaminants by applying a new flux collection device.
- Extended PM cycle and improved maintainability
- Equipped with a system for quick replacement of the collection device (for docking)

Reflow of the future that everybody has dreamed of

Please experience to the fullest the innovative functions that have evolved one step further.

- Effective for energy saving by minimizing the change in the internal temperature and reducing power loss by insulating the reflow to optimize thermal efficiency.
- Allows the O₂ concentration to be easily converted selectively by standard by applying N₂ flow control interlocked with the PSA. The ESP adjusts the supply of the amount of generated N₂ as much as the amount of N₂ consumed in the oven to reduce the operation of the air compressor, saving the power costs significantly compared to existing systems.
- Upgraded the technology for uniform ppm control of entire zones. It is possible to maintain the ppm with the balance using the pressure difference by only injecting a minimum amount of N₂ after shutting off the inflow of air at the inlet and outlet and sealing the inside of the oven completely.
- Allows multi-tasking with 3 split screens on a wide monitor. Easy and convenient screen configuration and operation system allows easy access and reading.
- The MMI screen which is configured focusing on the convenience of the user provides a temperature monitoring function, an alarm against operation and maintenance cycles, calibration of the temperature meter and O₂ meter, as well as a help function that displays the manual necessary for the execution of the program.
- The RPPM (Real Time O₂ PPM Profile Monitoring) for which TSM acquired a patent can monitor the status of the O₂ ppm in real time inside the reflow without requiring the purchase of a separate profile measuring device and displays the ppm of entire zones by graph.
- TSM's WL-RTPM (Real Time Temperature Profile Monitoring) solved the problem of the defect of existing sensor methods and problems due to foreign materials. Interlocked with the T-Profiler developed by TSM itself, it can perform real time temperature profiling and make SPEC IN/OUT judgment simultaneously.
- All programs (MMI, RTPM and RPPM) were developed by TSM by optimizing them for its reflow. It allows integrated management of all information related to the reflow by providing it to the customers' server through a single interface.
- The large capacity FMS optimized for the characteristics of the reflow increases the cleaning interval by collecting the flux efficiently and reduces the down time of the reflow by applying a one touchdocking method and increases the customers' productivity by reducing the PM time.
- With its cutting edge ESP that supplies a large quantity of high quality nitrogen built into the reflow, it expands the customers' work space, ensures stable operation and economic benefits of cost saving by controlling the ESP precisely with the PC of the reflow. In addition, components are arranged at the front for effective inspection and maintenance.
- Partial Startup that performs multi-stage control of the heater reduces the basic power cost by minimizing the startup power to reduce the contract power and can reserve the date and time to start the reflow by using the weekly timer, thus further increasing work efficiency.
- Its new design maximizes the functionality of the reflow and adopts a structure to maintain the internal temperature of the oven stably and while maximizing the flux discharge. In addition, it secures the space for maintenance at the inlet and outlet sides and applies color and paint with a low discoloration rate and contamination.
- The new, special IR+hot air blow heating type heater system satisfies thermal efficiency and performance unlike existing hot air blow heating methods that heat heaters and use a convex current by controlling it with a motor. It maintains Δt even at low wind speed owing to its outstanding thermal conductivity. In addition, since it is designed to have high thermal efficiency, heat is transferred directly to the base metal, which improves soldering quality. It is suitable for micro pattern processes.

N₂ REFLOW

TRN - e SERIES

Automatic N₂ flow control according to the ppm setup
Applies an advanced energy saving system



The TRN series reflow developed by TSM through continuous innovation will give customers great satisfaction with its excellent functions and performance as a top model that realizes the ecology and humanism for which TSM is aiming.

- The TRN series models features the best of the best in all aspects including energy saving, flux recovery capability, total solution, etc. TSM realized the lowest N₂ consumption levels imaginable in its industry by applying a special structure that shields the inside of the oven as well as the system that controls the ppm of all zones uniformly. TSM has played a leading role in reducing N₂ consumption in the industry by continuously upgrading and focusing on N₂ consumption. Here, its newly developed N₂ flow control system supplies the minimum quantity of N₂ optimized to maintain the set ppm in the oven with the ESP connected to the oven and thus reduces the air consumed in the ESP significantly, reducing the power cost of the air compressor to a great extent. In order to respond to the process that uses solder containing a large amount of flux for the electric parts of automobiles, heaters are installed at the inlet to which flux is mainly adsorbed and the exhaust outlet of the cooling zone in order to prevent flux from remaining and to allow the exhaust to be discharged smoothly. In addition, by allowing the one touch type FMS normally installed at the cooling zone to be installed additionally even in the preheating zone as an option, the flux recovery rate is maximized to allow customers to minimize defects and process management loss.
- Leads the reflow technology by applying a special heater of IR+hot air blow type. TSM's special heater, which combines the convection method that creates convective flow of hot air heated by the heater using a motor to the IR method that transfers the radiant heat of the panel with high thermal efficiency directly to the base metal, maintains Δt even at low wind speed, allowing high quality soldering of micro patterns. In addition, it can realize a stable profile because there is little deviation of flow velocity. In particular, while existing plate heaters have burdened customers significantly with their high cost, TSM's panel heater will lead the industry with a new reflow that boasts both reasonable cost and quality.

Incessant innovation toward the top soldering technology realized the best result.

- By applying the 2 FMS (Flux Management System), the TRN series reflows features the improved flux recovery capability, making its value the highest.
- Realizes energy savings by applying the advanced ESP series N₂ generator that can automatically control the N flow rate.
- Leads the reflow technology by applying a special heater of IR+hot air blow type.
- By applying a new design, it secures the space needed for maintenance at the inlet and outlet sides and adopts a color with the lowest discoloration rate which is not easily contaminated.
- The strong blower motor with triple sealing structure and specially structured duct do not allow leakage of any N₂.

Keep the inside of the oven clean!
Leave it to the 2 FMS (Flux Management System)!

- Completely treats the flux carbonated gas generated during soldering by installing a flux management system (FMS) with high heat exchange capability at the preheater (PH) zone and at the rear of the reflow (2 places).
- Protects the products from the flying flux generated during soldering by treating the flux gas into liquid state using an outstanding radiator!
- Convenient maintenance! The radiator can be easily removed and installed by one touch, minimizing the workload required for maintenance.



TRN □-e□□-P
[PSA built in Type]



TRN □-e□□-R
[2 Flux Management System Type]

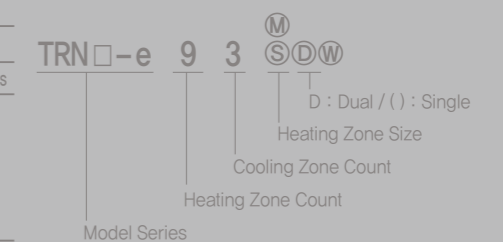


Effective Flux recovery and PM time reduction

Model

Model	
N ₂ Type	For Semiconductors
TRN □-e92 ^M	TRN □-e52 ^M
-e93 ^M	-e82 ^S ^W
-e102 ^S	-e93 ^M
-e103 ^M	-e124 ^S

Model Numbering



N₂ REFLOW
N70 - e SERIES

The perfect harmony of performance and stability realized a unique and outstanding upgrade.

- In order to continue the reputation of the best selling N70 series, a unique and outstanding upgrade has been made.
- N₂ flow control reduced N₂ consumption and realized energy saving.
- Direct control of the N₂ generator(ESP) in the reflow screen makes it easy to operate the reflow.

Please experience the sophisticated and luxurious N70-e series reflow whose function and specifications have greatly improved upon traditional frames.

- Satisfies both specifications and price the beginning with the function improvement broken from the existing frame, and ensures low running cost and maintainability. Users have not yet tired of the look of the reflows in this series even though they have been in use for many years owing to their gentrified design and ability to paint with low discoloration rate. As a model that has been much loved by customers for many years, the more sophisticated and gentrified N70-series reflow with various functions has upgraded RTPM, RPPM, N₂ flow control, FMS whose flux recovery capability is improved, MMI whose operation is convenient, and a triple-sealed blower motor, etc., aiming at optimizing the customers' production capacity.
- The newly designed reflow with its maximized reflow oven function maintains a stable temperature inside the oven, reduces N₂ consumption significantly compared to existing reflows by adopting N₂ flow control, and exhibits outstanding performance in maintaining O₂ ppm. Essentially, the cooling zone applies a new design that has further improved the capability of flux recovery at the oven inlet and inside the oven.
- Direct control of the new energy saving N₂ generator (ESP series) by the reflow MMI will allow convenient operation of the reflow and reduction of the air compressor power consumption. Sophisticated MMI configuration maximized the convenience of reflow operation.
- Due to changes in energy policies, the watt-hour meter and integrated flow meter used for the monitoring system are provided as an option for the efficient management of N₂ and power used by the reflow, helping energy management.



*Ultra-low power consumption responding to CO₂ emission regulation
 Upgraded next generation reflow realizing the minimized N₂ consumption*



Do you want to know the O₂ concentration in each zone in the N oven?

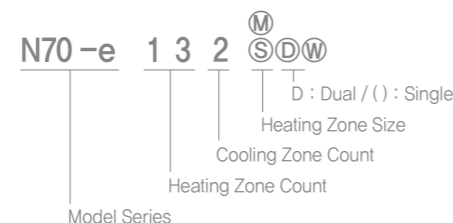
If it fails to maintain uniform N₂ ppm throughout the zones from the PH1 to the cooling zone, solderability is reduced due to thermal oxidation during soldering, causing product reliability to be reduced.

The real time ppm check system (RPPM), developed and patented by TSM quickly collects the O₂ concentration in each zone and displays it with a real time graph to prevent any defects that may occur due to non-uniform ppm.

Model

N ₂ Type (Ⓜ : Option)	
S/D/W	M/D/W
N70 -e82Ⓢ	N70 -e82Ⓜ
-e102Ⓢ	-e92(3)Ⓜ
-e103Ⓢ	-e103Ⓜ
-e153Ⓢ	-e123Ⓜ
	-e132Ⓜ

Model Numbering



N₂ REFLOW
ES-SERIES

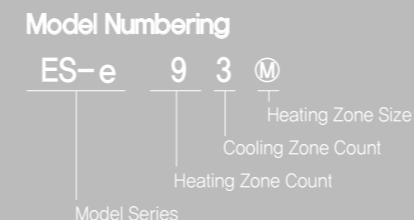
ES-series reflows realize environment friendliness and power cost reduction by minimizing N₂ loss and power consumption



N₂ generator (PSA) built into the reflow allows for innovative space design!

The N₂ generator (PSA) built into the reflow features compact design that needs no separate space, ensuring a pleasant work environment. It is possible to save energy by 20~30% by interlocking the energy saving N₂ generator (ESP series) developed by us with the reflow MMI.

Model	
N ₂ Type (◎ : Option)	
◎	Ⓜ
ES - e82◎	ES - e82Ⓜ
- e92◎	- e92(3)Ⓜ
- e102(3)◎	- e102(3)Ⓜ



There is no other reflows in the world that has been upgraded more than this one. The newly released ES-Series reflow satisfies all of the functionality, economic efficiency and practicality by overcoming its limitations.

- It is equipped with the most advanced "ESP-series" N₂ generator that can control the N₂ purity and flow rate as a built-in type, a first in its industry.
- Realizes unrivaled energy saving by automatically adjusting the N₂ generation quantity being interlocked with the reflow.

Satisfies the need for functionality, economic efficiency and practicality, while its unique design presents an outstanding look even during downtime.

- By being equipped with the most advanced ESP-series N₂ generator that can control N₂ purity and flow rate as a built-in type and a first in its industry, this reflow helps customers make better use of space and can operate and use the N₂ generator conveniently and stably by controlling it precisely with the reflow MMI.
By automatically controlling the N₂ generation quantity with the reflow MMI being interlocked with the N₂ generator (ESP-series) optimized for the innovative ES-series reflow, it not only ensures the greatest energy saving in the industry but also realizes minimum N₂ consumption and maintains stable ppm with minimum N₂ quantity, thus allowing the N₂ generator to be controlled by the N₂ reflow.
- By arranging its components at its front for convenient maintenance of the built-in type N₂ generator, the user can perform follow-up management of the N₂ generator without difficulty. The convenience for the user is improved when operating the N₂ generator by adding a function that shows with a message or alarm the operation and maintenance cycle at the time set by the user in the new MMI dedicated to the sophisticated N₂ generator whose convenience is maximized.



AIR REFLOW

TRA-f SERIES

Provides innovative solutions through energy savings and environmentally friendly policies.

- Has set the standard for power consumption and will continue to be your reliable supporter.

As an output for the achievement of highest performance and economy, the TRA series will satisfy both the economic efficiency and practicality of your business.

- TSM, which performs technical development continuously, realized ultra-low power consumption for the reduction of CO2 emissions in order to realize the economy, the keyword of the TRA series reflows.

The partial start-up which performs the multi-stage control of heaters reduces the contracted receiving power and basic power cost by minimizing the start-up power. It also increases production efficiency by utilizing the weekly timer function which allows reservation of machine operation date and time.

In addition, in order to respond to the placement characteristics of various boards, heating efficiency is maximized by multiplying the heating zones and applying a new nozzle structure with improved air flow resistance. It also realizes the best quality by applying an advanced ultra-uniform temperature control system to realize the lowest temperature deviation.

The TRA series reflows ensures efficient production of products by applying uniform heating from above and below as well as variable heating from above and below separately. The MMI screen configured for user convenience provides a temperature monitoring function, an alarm for operation and maintenance, a temperature calibration gage, and a help function for program operation, thereby maximizing user convenience for access and reading.

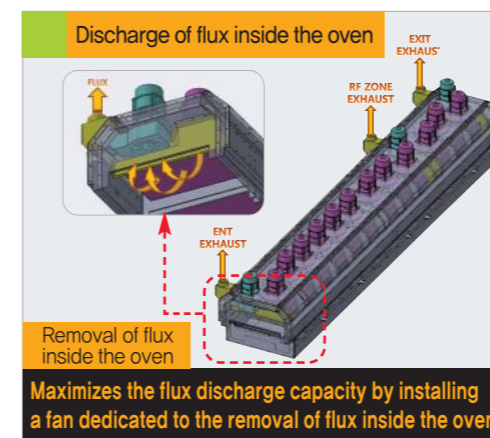
The RTPM (op), a real time temperature profile monitoring system, provides a variety of information as well as the process index and chart data for the analysis of compatibility and process capability.

The TRA series reflows are an innovative design that ensures efficient flux discharge as well as highly efficient thermal management



Why should you use TSM's reflow?

- ✓ System configuration with outstanding durability
- ✓ Reliable quality
- ✓ Energy saving insulation structure
- ✓ Blower motor with triple sealing
- ✓ Reliable follow-up management



Model

Air Type	
S/D/W	M/D/W
TRA □ -f82S	TRA □ -f71M
-f102S	-f82M
	-f92(3)M
	-f123M
	-f132M

Model Numbering

TRA □ - f 10 2 (M) (S) (D) (W) (H)

□ : Dual / () : Single
 Heating Zone Size
 (Items not indicated correspond to (M))
 Cooling Zone Count
 Heating Zone Count
 Model Series

PSA N₂ Generator ESP - SERIES

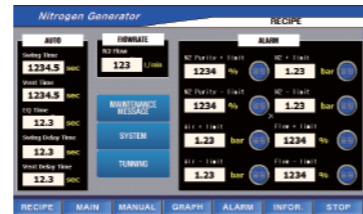
It is possible to freely set the purity and consumption of O₂ through the GUI (Graphic User Interface).

Features

- Allows interlocked operation with our reflow MMI and ensures outstanding energy savings since it can be controlled by ppm.
- Possible to freely set the purity and consumption of N₂ through the GUI (Graphic User Interface).
- Applies an innovative operation program that can check various data with a graphic chart.
- Improves manipulability and user convenience by applying a touch panel.
- Minimizes variation of flow rate due to differential pressure by adopting an electronic valve.



Model	Capacity Nm ³ /Hr (99.99%)	Discharge Pressure (Mpa)	Weight (kg)	Dimension D x W x H(mm)
ESP-N12RT-99	12	0.5	730	1,560 x 520 x 1,260
ESP-N15RT-99	15		810	1,560 x 520 x 1,360
ESP-N18RT-99	18		880	1,560 x 520 x 1,460
ESP-N20RT-99	20		960	1,560 x 520 x 1,610
ESP-N25RT-99	25		1,160	1,560 x 520 x 1,690



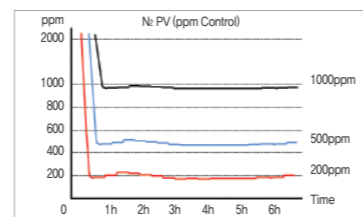
Operation Interlocked with TSM's Reflow

Allows control operation from the reflow with the ESP being interlocked with our reflow operation program (MMI). The N₂ generator can be controlled by changing the operation conditions by production model (ppm), thus allowing energy savings.



Convenient Touch Panel

User convenience has been improved further by applying a convenient touch panel.



N₂ Purity Control

It is possible to set the purity of produced nitrogen in the ppm unit and control the swing time selectively.



Interlocked Control of Reflow and PSA

Interlocked control of the reflow and PSA control by ppm, thus allowing outstanding energy savings.

Eco-friendly, low power consuming N₂ generator effectively responding to customers' needs

N₂ GENERATOR

Low noise N₂ generator that can be easily moved and managed owing to its compact structure!

Compact Size

Possible to use space effectively owing to compact design.

Free Installation and Relocation

Possible to be freely moved by installing casters on all types of N₂ generators and therefore to use space effectively.

Low Noise

Can be used indoors with no problem owing to low operational noise.

Convenient Manipulability

Operation and movement can be easily managed and controlled with the display panel. O₂ purity is displayed.

▷ Moving PSA Type A

Model	Capacity Nm ³ /Hr (99.99%)	Discharge Pressure (Mpa)	Air Compressor (kw)	Weight (kg)	Dimension D x W x H(mm)
TPM-N1R-99	1	0.5	1.5	300	860 x 400 x 1,000
TPM-N2R-99	2			300	860 x 400 x 1,000
TPM-N3R-99	3		310	1,100 x 530 x 890	
TPM-N4R-99	4		330	1,100 x 530 x 890	
TPM-N5R-99	5		350	1,100 x 530 x 890	



Moving Type A

▷ Moving PSA Type B

Model	Capacity Nm ³ /Hr (99.99%)	Discharge Pressure (Mpa)	Air Compressor (kw)	Weight (kg)	Dimension D x W x H(mm)
TPM-N10R-99	10	0.5	7.5	600	1,480 x 560 x 1,340
TPM-N12R-99	12			700	1,480 x 560 x 1,340
TPM-N10RT-99	10		600	1,510 x 420 x 1,360	
TPM-N12RT-99	12		700	1,620 x 470 x 1,330	
TPM-N15RT-99	15		800	1,708 x 520 x 1,365	
TPM-N15RL-99	15	700	1,300 x 520 x 1,365		
TPM-N17RL-99	17	900	1,480 x 560 x 1,340		



Moving Type B

N₂ Generator that supplies high purity nitrogen to the N₂ reflow continuously and stably!

Easy Maintenance

Allows easy maintenance by applying a highly reliable solenoid valve.

Simple

Can supply high purity nitrogen gas by only supplying power.

▷ TPC-Type PSA

Model	Capacity Nm ³ /Hr (99.99%)	Discharge Pressure (Mpa)	Air Compressor (kw)	Weight (kg)	Dimension D x W x H(mm)
TPC-N30R-99	30	0.5	22	1,500	1,400 x 900 x 2,100
TPC-N40R-99	40		30	1,900	1,450 x 950 x 2,300
TPC-N50R-99	50		37	2,400	1,500 x 1,100 x 2,400
TPC-N60R-99	60		55	2,700	1,650 x 1,100 x 2,600
TPC-N80R-99	80		55	3,200	1,800 x 1,200 x 2,800

* N₂ Service Tank는 포함되지 않음



TPC - Type

Can supply high purity and low dew point N gas stably.

▷ TP-Type PSA

Model	Capacity Nm ³ /Hr (99.99%)	Discharge Pressure (Mpa)	Air Compressor (kw)	Weight (kg)	Dimension D x W x H(mm)
TP-N30R-99	30	0.5	22	1,520	1,400 x 1,520 x 2,100
TP-N40R-99	40		30	1,830	1,450 x 1,600 x 2,300
TP-N50R-99	50		37	2,340	1,500 x 1,750 x 2,400
TP-N60R-99	60		55	2,610	1,650 x 1,850 x 2,600
TP-N80R-99	80		55	3,100	1,800 x 2,050 x 2,800
TP-N100R-99	100	75	3,200	1,850 x 1,700 x 3,000	
TP-N120R-99	120	90	3,400	1,950 x 1,800 x 3,200	

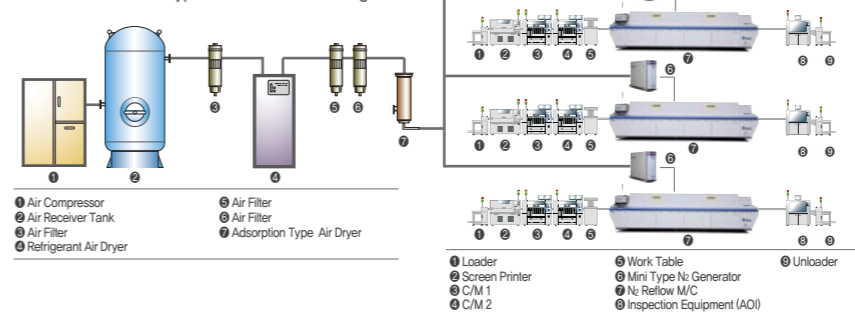


TP - Type

N₂ GENERATOR

Example of installation in a line

< N₂ Generator(TPM - Type) + N₂ Reflow Flow Diagram >

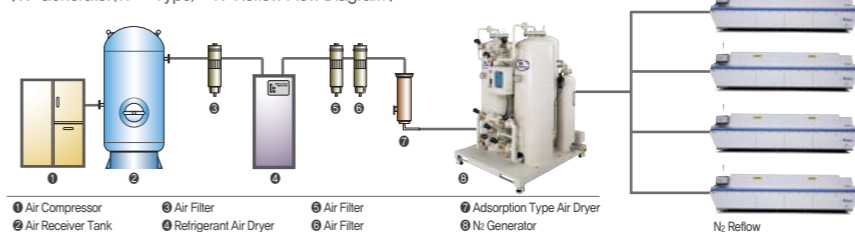


Test Room

< Inspection and Certifying Test >



< N₂ Generator(TP - Type) + N₂ Reflow Flow Diagram >



EQUIPMENT

		N70-e	ES-	TRN-e	N70-i
Mechanism	Basic Sheath Heater	●	●	●	●
	Special Plate Heater	-	-	▲	-
	Separable Blower Motor	-	●	●	-
	Triple Sealed Blower Motor	●	●	●	●
	Detachable FMS	●	●	●	●
Operation	C/V chain + Center Support	●	●	●	●
	C/V chain + Mesh	▲	▲	▲	▲
	Special Attachment Chain	●	●	●	●
	Mesh Belt Only Type	▲	▲	▲	▲
	Low Vibration Mesh Belt	▲	▲	▲	▲
	C/V chain + Two CenterSupport	▲	▲	▲	▲
	C/V Width Semi Auto	●	●	●	●
	C/V Width Full Auto	▲	▲	▲	▲
	Torque Limit (Overload Prevention)	●	●	●	●
	Dual Type (Simultaneous F/R Control)	▲	▲	▲	▲
Dual Type (Independent F/R Control)	▲	▲	▲	▲	
Convenient Function	N ₂ Quick charge	▲	▲	▲	▲
	Cooling Zone Heater	▲	▲	▲	▲
	RTPM	▲	▲	▲	▲
	RPPM	▲	▲	▲	▲
	Watt Hour Meter	▲	▲	▲	▲
	Integrated Flow Meter	▲	▲	▲	▲
	Detection Sensor of B/M Rotation	▲	▲	▲	▲
	PSA Built in type	-	▲	▲	-
	ND System	●	●	●	▲
	New MMI + ESP Interlock	●	●	●	-
	N ₂ Flow Rate Control	●	●	●	-
	O ₂ Flow Control	-	-	-	●
	Bar Code Function	▲	▲	▲	▲
New UPS (Charge Indicator + Communication Function)	▲	▲	▲	▲	
Digital Flow Meter	▲	▲	▲	▲	
Others	SMEMA	▲	▲	▲	▲
	CE	▲	▲	▲	▲
	SECS/GEM	▲	▲	▲	▲
	Dual Monitor	▲	▲	▲	▲
	T-Profilor	▲	▲	▲	▲

●:Standard ▲:Option - :Not Applicable



Factory in Sihwa MTV Complex

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