In-Line Cure Oven

Model ICO-212

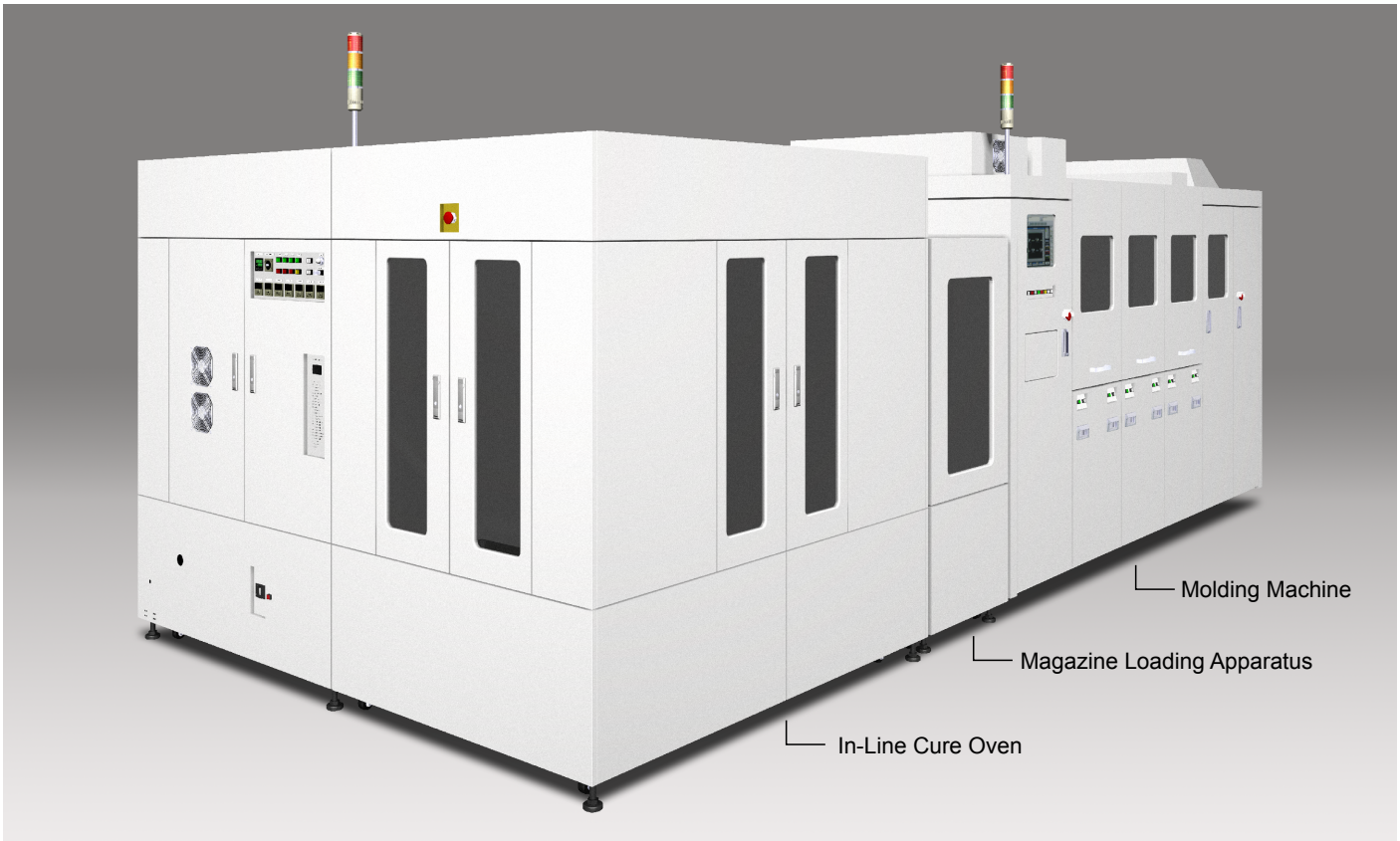
Operating Temperature Range
Room Temp.+15℃~250℃

Temperature Uniformity
±3.0℃ (at 250℃)

Cure Time
up to 6 hours

Purpose : **Automatic curing process for BGA and Lead Frame package.**

Feature : **●Perfectly In-Line Cure Oven system.**
●3 zone heating chamber build in system.
(Pre-heating zone, cure heating zone, pre-cooling zone)



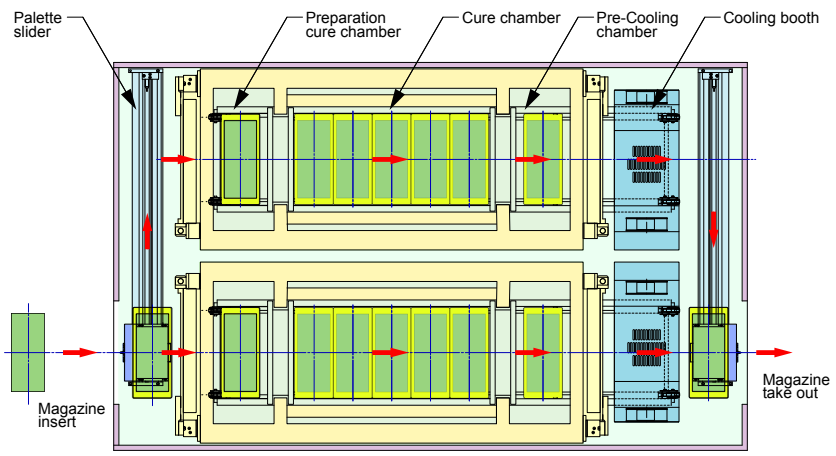
Cure Oven Series

One Line (ICO-111)
Mold machine frame capacity : 2 Frame-120 Strip/hour
Cure time : 1~6 hours
Tact time : 40 min/Magazine (Stock Magazine type)

Two Line (ICO-212)
Mold machine frame capacity : 4 Frame-360 Strip/hour
Cure time : 1~6 hours
Tact time : 15 min/Magazine (Stock Magazine type)
Tact time : 30 min/Magazine (Slit Magazine type)

Four Line (ICO-224)
Mold machine frame capacity : 4 Frame-360 Strip/hour
Cure time : 1~6 hours
Tact time : 15 min/Magazine (Stock Magazine type)
Tact time : 15 min/Magazine (Slit Magazine type)

Flow Diagram (Two Line Cure Oven)



In-Line Cure Oven

System Performance and Conditions

Model	ICO-212
■ Work Size	
Magazine size	Stack Magazine　W80 × D265 × H (450)
■ Tact Time	
	Stack Magazine (90 Strips storage) Chamber number : 2 line (Right and Left : Stack Magazine each 12 pcs) Tact Time : 15 min/Stack Magazine Mold : 4 head mold—360 strip/H　Stack MG Total　24 pcs　(12MG × 2 line)
■ Loading System	
Loading from Molding Throw to Cure chamber Loading of Cure chamber Carry out from Cure chamber Throw to cooling line Loading of Cooling line Loading and put on correct position	Loading and put on correct position from Molding Transfer unit and Loader system Working beam Un-loader system Transfer unit Free flow conveyor Transfer unit
■ Process Condition	
Cure Time Cure Temperature Cooling time	3 Zone control system (Pre heating—Main cure—Pre cooling) 1～6 hours (Stack Magazine) Cure time set : Set 0～99 hours Temp. set : 50℃～250℃

Apparatus Specification

Model	ICO-212
■ System	
Operation control Heating method Work Loading 3 Zone Heating control system	PLC control system Forced Hot Air circulation type by heater Palette loading　Carry in : Loading unit Chamber : Working beam loading unit Carry out : Un-loading unit Cooling : Free flow conveyor Pre heating chamber – Main cure chamber – Pre cooling chamber
■ Apparatus structure	
●Cure Chamber External material Internal material Insulation material Door Inspection Door Blower motor Heater Exhaust Cure chamber size External dimension	1 set Cold rolled steel plate with melamine resin baking finish Type 304 Stainless steel Glass wool t 50 Up/Down operation by Air cylinder Side of chamber Sirocco fan 200W × 2 Stainless pipe heater ϕ25 exhaust port with dumper W2100mm × D1100mm × H800mm W2900mm × D2400mm × H1500mm
●Loading unit Magazine loading Pallet loading Throw palette Control	1 set Transfer unit Loader PLC
●Loading in Chamber unit Work loading Control	1 set PLC
●Un-loading unit Carry out palette Control	1 set Un-loader unit PLC
●Control panel PLC touch panel	1 set
●Cooling conveyor Work loading Cooling system Exhaust booth	1 set Load/Un load unit Air cooling by fan motor Max.10m^3/min

■ Performance/Condition	
Operating Temperature range Temperature uniformity Temperature rise time Process time Work tact time Magazine number in Chamber	Room Temp. ＋15℃～250℃ ±3℃ (at 250℃ 9 points in the Main Chamber) With in 15 min (Room temp. ～175℃ with sample) 60min～360min (Setting by Timer) Standard　15min/Stack Magazine Stack Magazine　1 line × 12 Magazine (2 line-24MG)
■ Controller	
Temperature controller Temperature sensor Cure timer Temp. sensor for recorder	Programmable controller PID control, Digital display K type thermocouple 0～99 hours 59 second 9 points in the chamber
■ Safety	
	Circuit breaker Protect blower motor by thermal relay Protect over heating Over and under temperature alarm Protect loading unit Protect Un-loading unit Protect chamber conveyor Protect cooling conveyor Pressure Air alarm Tact over
Trouble indication	By patolight Operation　Green color Stop　Yellow color Alarm　Red color Emergency stop switch

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