

 LCI Furnaces DIVISION OF LOCHABER CORNWALL INC CONTINUOUS BELT IR FURNACE	EQUIPMENT SPECIFICATIONS		DOC NBR: 21-007 - 802-101401 R0	
			MODEL: RTC LA-306	CUSTOMER: Ametek
			SERIAL NBR: 1306039101	SHT 1 OF 1 PRNT 12/01/21

Equipment Model		Application: Low O2 Glass Plate			
Model	Base Equipment	Control Zones	Furnace Heated Length		Nominal Furnace Belt Width
RTC LA-306	Continuous Belt Controlled Atmosphere Furnace	3	28 in	70 cm	6.0 in 15 cm

Equipment Arrangement					
Phase	Process	Max	Length		Process Gas Temperature (range)
Phase 1	IR Furnace, 3 Zones	1000 °C	28 in	70 cm	N2 100-960 C
Phase 2	Transition Tunnel		15 in	38 cm	N2 100-850 C
	Gas Convective Cooling, Exterior Fan Heat Removal		30 in	76 cm	N2 25-360 C

Process Sections						
Function	Name	Location	Length		Process Gas	Temperature (typ)
	Load Station	Entrance load area	9.5 in	24 cm		ambient
IR Furnace	ENTRANCE BAFFLE	Entrance barrier	6.3 in	16 cm	N2	360 °C
	ZONE 1	Heating chamber 1	6.6 in	17 cm	N2	300 °C
	ZONE 2	Heating chamber 1	14.3 in	36 cm	N2	350 °C
	ZONE 3	Heating chamber 1	6.6 in	17 cm	N2	675 °C
Cooling	TRANS TUNNEL, NO ED	Heat/cool barrier, single ed	6.3 in	16 cm	N2	575 °C
	CACT-COOLING TUNNEL	Cooling section	40.0 in	102 cm	N2	260 °C
Product Unload	Unload Station	Exit station	9.5 in	24 cm		ambient
	Frame Adjustment		1.0 in	3 cm		
	Total		100.0 in	254 cm		

Process Gas							
	Actual Conditions		Typical		Typ Annealing (pos atmos)		Max (all flowmeters open)
Furnace Replenishment Rate			2.0 rep/min		3.5 rep/min		7.7 rep/min
	Temp °C	Press psi	Min Flow scfh	Min Flow sL/m	Typical scfh	Typical sL/m	Max Compressor sL/m
N2 Supply	21	70	199	94	346	163	1,547 730
TOTAL PROCESS GAS			202	95	346	163	1,547 730

Exhaust Gas							
	Temp °C	Press in H2O	Min Flow scfh	Min Flow sL/m	Typical scfh	Typical sL/m	Maximum Exhaust sL/m
N2 & CDA mix	200	6	101	48	213	101	3,477 1 641

Cabinet Ventilation			
Cabinet Ventilation Fans (vent to room or exhaust system)	Flowrate	550 cfm	930 m3/h
	Temperature	<86°F	<30°C

Transport System			
Belt width	6.0 in	15.2 cm	Belt Edge Heater(s): none
Belt type	Balanced spiral weave		Motor: Bodine 1/50 HP
Product height	2 in (5.1 cm) above belt level.		Baffle plate clearance: 0.25" above belt
Belt speed range	0.5 - 10 inches per minute		1.27 - 25.4 cm per minute
Conveyor height	36.0 in	+/- 1.5 in adjustable	91.4 cm +/-3.8 cm adjustable

Electrical System	
Voltage required	208 Vac, 60 Hz, 1 Ph
Maximum power required	13.9 kW, 66.6 A
Typical (operating) power required	5.7 kW, 27.2 A

Materials of Construction					
Heating Chamber	Aluminum, aircraft	Cooling	Aluminum, aircraft	Belt	Nichrome V, 80%Ni,20%Cr, <1% Fe
Baffle & Eductor	Aluminum, aircraft	Belt support	Quartz rod, Quartz tube	Frame	Steel, 2-prt urethane or powder coated
Heating element	Quartz, near infrared	Belt Return	UHMW-PE	Cover Panels	18GA Steel, urethane or powder coated

Furnace Dimensions							
		Length	Width	Height (floor to stack)	Furnace Sect	Coolg Sectn	Weight
Furnace, English	Net	102 in	18 in	65 in +/- 1.5 in	800 LB		800 LB
Furnace, Metric	Net	2.59 m	0.46 m	1.64 m +/- 0.04 mm	363 kg		370 kg
Standard Conditions		Pressure	14.7 psia	101.3 kPa	Temperature	70 °F	21 °C