

 LCI Furnaces DIVISION OF LOCHABER CORNWALL INC CONTINUOUS BELT IR FURNACE	EQUIPMENT SPECIFICATIONS	DOC NBR: STD - 802-101401 R3
		MODEL: LA-306 STD & HIGH POWER
		SERIAL NBR: ALL SIZE A SHT 1 OF 1

Equipment Model				
Model	Base Equipment	Control Zones	Furnace Heated Length	Nominal Furnace Belt Width
LA-306	Continuous Belt Controlled Atmosphere Furnace	3	30 in 762 mm	6.0 in 152 mm

Equipment Arrangement					
Phase	Process	Max	Length	Process Gas	Temperature (typ)
Phase 1	IR Furnace, 3 Zones	1000 °C	30 in 762 mm	CDA, N2, FG	450-950 C
Phase 2	Gas Convective Cooling, Exterior Fan Heat Removal (includes transition tunnel)		45 in 1143 mm	CDA or N2	350-40 C

Process Sections					
Function	Name	Location	Length	Process Gas	Temperature (typ)
Product Load	Load Station	Entrance load area	15 in 381 mm	none	ambient
IR Furnace	Entr Baffle/Entrance Eductor	Entrance barrier	15 in 381 mm	CDA or N2	80-250 C
	Zone 1	Heating chamber 1	7.5 in 191 mm	N2 or FG	80-975 C
	Zone 2	Heating chamber 1	15 in 381 mm	N2 or FG	80-975 C
	Zone 3	Heating chamber 1	7.5 in 191 mm	N2 or FG	80-975 C
Cooling Section	Transition Tunnel	Heat/cool barrier	15 in 381 mm	CDA or N2	625 °C
	Gas Convection Cooling	Cooling section	30 in 762 mm	CDA or N2	55-360 C
Product Unload	Unload Station	Exit unload area	15 in 381 mm	none	ambient
	Frame Adjustment		1 in 21 mm		
	Total		121 in 3070 mm		

Process Gas (If Single Gas combine GAS1 & GAS2. Dual Gas: GAS 2 = CDA, N2 or FG to furnace heating zones, GAS1=N2 or CDA to all except zones)								
	Actual Conditions		Typical 425 C CDA operation		Typical 950 C, low O2 operation		Max (all flowmeters open)	
Furnace Replenishment Rate	Temp °C	Press psi	Typical scfh	Min Flow sL/m	Typical scfh	Typical sL/m	scfh	Max Compressor sL/m
			2.0 rep/min		3.0 rep/min		4.3 rep/min	
Gas1 Supply	21	70	212	100	170	80	662	312
Gas2 Supply	21	70			83	39	417	197
TOTAL PROCESS GAS			212	100	253	119	1,078	509

Exhaust Gas								
	Temp °C	Press in H ₂ O	Typical scfh	Min Flow sL/m	Typical scfh	Typical sL/m	scfh	Maximum Exhaust sL/m
GAS 1 & 2, MIX	200	6	212	100	200	94	348	164

Cabinet Ventilation			
Cabinet Ventilation Fans (vent to room or exhaust system)	Flowrate	550 cfm	930 m3/h
	Temperature	<86°F	<30°C
Control Cabinet Ventilation Fans (vents to room)	Flowrate	212 cfm	360 m3/h
	Temperature	<86°F	<30°C

Transport System		
Belt width	6.0 in 152.4 mm	Belt Edge Heater(s): none
Belt type	Balanced spiral weave	
Product height	2 in (50.8 mm) above belt level.	Baffle plate clearance: 0.5" above belt
Belt speed range	1-20 ipm 25-500 mm/m	
Conveyor height	36.0 in +/- 1.5 in adjustable	914.4 mm +/-38.1 mm adjustable

Electrical System	Standard				High Power			
	208 Vac	220 Vac	230 Vac	240 Vac	208 Vac	220 Vac	230 Vac	240 Vac
Voltage (as configured)	208 Vac	220 Vac	230 Vac	240 Vac	208 Vac	220 Vac	230 Vac	240 Vac
Frequency, Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Phase	1	1	1	1	1	1	1	1
Power, maximum, kW	14.2	14.2	14.5	14.8	17.2	17.2	17.2	17.2
Current, maximum, A	67 Hz	64.4	62.9	61.6	82.7	78.1	75.4	72.3
Power, kW, operating @ 950 C	7.8	8	8.1	8.3	9.6	9.6	9.6	9.6
Current, A, operating @ 950 C	37.5	36.3	35.4	34.6	46.3	43.8	41.9	40.1
Power, kW, operating @ 425 C	5.8	5.9	6.0	6.2	7.1	7.1	7.1	7.1
Current, A, operating @ 425 C	27.8	26.9	26.2	25.6	34.2	32.3	30.9	29.6

Materials of Construction			
Heating Chamber	304 Stainless steel	Cooling	Aluminum, aircraft
Baffle & Eductor	304 Stainless steel	Belt support	Quartz rod, Quartz tube
Heating element	Quartz, near infrared	Belt Return	UHMW-PE
			Belt Nichrome V, 80%Ni,20%Cr, <1% Fe
			Frame Steel, epoxy or powder coated
			Cover Panels 18GA steel, epoxy coated

Furnace Dimensions						
	Length	Width	Height (floor to stack)	Furnace Sect	Coolg Sectn	Total Net Wt
U.S.	121 in	25 in	80 in +/- 1.5 in	1100 LB	none	1100 LB
Metric	3.1 m	64 cm	203 cm +/- 3.8 cm	500 kg	none	500 kg
Standard Conditions		Pressure	14.7 psia 101.3 kPa	Temperature	70 °F	21 °C