



Laddle Preheater/Dryer

NUTEC Bickley's Preheaters, Heaters, and Pot Dryers are designed to reduce fuel consumption, improve thermal efficiency, and lower operating costs.



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Oven General Specifications:			
Equipment Description	Vertical ladle dryer/preheater		
Product	Ladle		
Operating temperature	1100 °C	Max. operating temperature	2102 °F (1150 °C)
Firing cycle	Less than 3 hours for preheating function It depends on the firing curve for the drying function		
Type of Operation	Batch		
Ladle atmosphere	Oxidizing		
Ladle steel capacity	140 – 200 ton		
Ladle external dimensions	Height 4.67 m	External Diameter 2.41 m	Internal Diameter 1.83 m
Hydraulic Unit	Hydraulic System for arm movement for the Ladle cover – 40 GAL and 25 HP Stroke length (number of steps): The stroke of the 2 hydraulic pistons is approximately 900 mm (35 in). Total stroke and sequence: Radial 90° (Horizontal arm (0° with respect to horizontal) and vertical arm (90° with respect to horizontal)).		
Arm lifting time (Estimated)	Time to Open: 25 to 30 seconds Time to Close: 35 to 40 seconds		
Fluid for hydraulic unit	Water/glycol mix		
Fuel	Natural Gas		
	BTU/ft ³ 1,000	MJ/m ³ 37.26	Kcal/ m ³ 8,905
	Fuel notes: a. Written confirmation of the physical and chemical properties of all fuels is to be provided by the Buyer. b. Gas to be clean, dry, and free from contaminants. c. The Seller accepts no liability or consequential losses because of fuels containing elements that may detrimentally affect the integrity of the oven or the products being fired		

Technology			
Electrical supply	Volts	Phases	Cycles
Power	440	3	60 HZ
Control	110	1	60 HZ
Total installed thermal capacity	BTU/hr 16,400,000	Kw 4806	
Fuel pressure supply (by customer)	75 PSIG		
Burner type	North American model 4575-12-1D		
Burner position	Firing downwards		
Fuel	Natural gas		

**For more information,
Contact us:**

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Technology		
No of burners fitted	1	
Burner flame supervision	Honeywell Relay Amplifier with UV Scanner Adaptor or FlameRod	
Temperature control groups	1	
Temperature control method	Fuel Only	
Combustion air supply	Centrifugal Combustion Fan with Filter, 3400 ACFM, 56.5 "WC	
Optional	Preheated air supplied by a heat exchanger	
Insulation	12" HTZ Ceramic fiber (12lb/ft3) for ladle cover	
Piping and ducting	Fuel lines and manifolds	Carbon steel
Instruments and controls	PLC'S M340 Schneider Allen Bradley Control Logix/Compact Logix S7-1500 and ET200SP	HMI: Magelis GTU Smart Display Touch 10.4" Panel View Plus 7 Siemens Unified ComfortP
Thermocouples	Quantity 2	Type "K" – 11Ga
Temperature control (High Limit)	TEMPCO TEC 910	

Safety	
Operational safety devices	<p>The fuel supply is automatically shut off if any of the following conditions occur:</p> <ul style="list-style-type: none"> • Low/high pressure gas • Low flow Air combustion • Cover is out of position • Electricity is cut off • Others can be added according to customer's request
Safety/Construction standards	<p>NFPA86 (For combustion equipment) NFPA70E (For control panel and electric equipment)</p>
Limit Switch Included	<p>Includes 2 limit switches for cover on/off position Safety Permissive:</p> <ul style="list-style-type: none"> • If the cover is in a 180° position the burner into to the low fire (or off)

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