

Description

1.1 SPECIFICATIONS

The BTU TS Rapid Reflow Furnaces are designed to meet the critical requirements for rapid reflow soldering cycles (15 to 45 seconds) necessary to produce uniformly strong bonds with minimum degradation of components.

These rapid reflow cycles are achieved by combining a highly conductive muffle material with two heat barriers enclosing the last heated zone to produce a sharp peak in temperature when the "between-barrier" zone is run at high heat. The barriers can be de-activated for other applications.

FURNACE REFERENCE NUMBER:

MAC-4 (TS94-4-60N48)

TEMPERATURE RATINGS

Maximum	600°C
Nominal	200-350°C
Reflow Zone Maximum	800°C
Nominal	350-750°C

TEMPERATURE CONTROLS

One 3615 Microprocessor Control Channel per zone
One Type K Thermocouple per zone
One Solid State Input Control per zone

OVERTEMPERATURE PROTECTION

Two factory set dedicated overheat controls with thermocouple, thermocouple break protection, contactor and alarm.

1.1 SPECIFICATIONS (continued)

WORKING DIMENSIONS

	<u>MM</u>	<u>IN</u>
Belt Width	228	9
Product Clearance	102	4
Loading Table		
Length	610	24
Width	635	25
Unloading Table		
Length	610	24
Width	635	25

CONVEYOR SYSTEM

Belt type	Stainless Steel Mesh B42-27-18
Nominal Speed	381 mm/min (15 IPM)
Range	127-635 mm/min (5-25 IPM)
Loading	.9KG FT ² (2 lbs/ft ²)

ELECTRICAL

Approximate Heater Power	15 KW
Operating Voltage	220V, 60Hz, 3 phase

FURNACE LAYOUT

	<u>MM</u>	<u>IN</u>
Entrance with N ₂ Curtain, and Baffle Assembly	1219	48
Zone 1	305	12
Zone 2	305	12
Zone 3	610	24
Vestibule with Heat Barrier	152	6
Zone 4	152	6
BTU Patented Heat Barrier and Water Cooling Section #1	51	2
with Atmosphere Cooling Jets	610	24
Water Cooling Section #2	1524	60
Exit with N ₂ Curtain, and Baffle Assembly	457	18

ATMOSPHERE CONTROL SYSTEM

One BTU Non-explosive Atmosphere Control System (10-20 PSIG)

Flowmeters

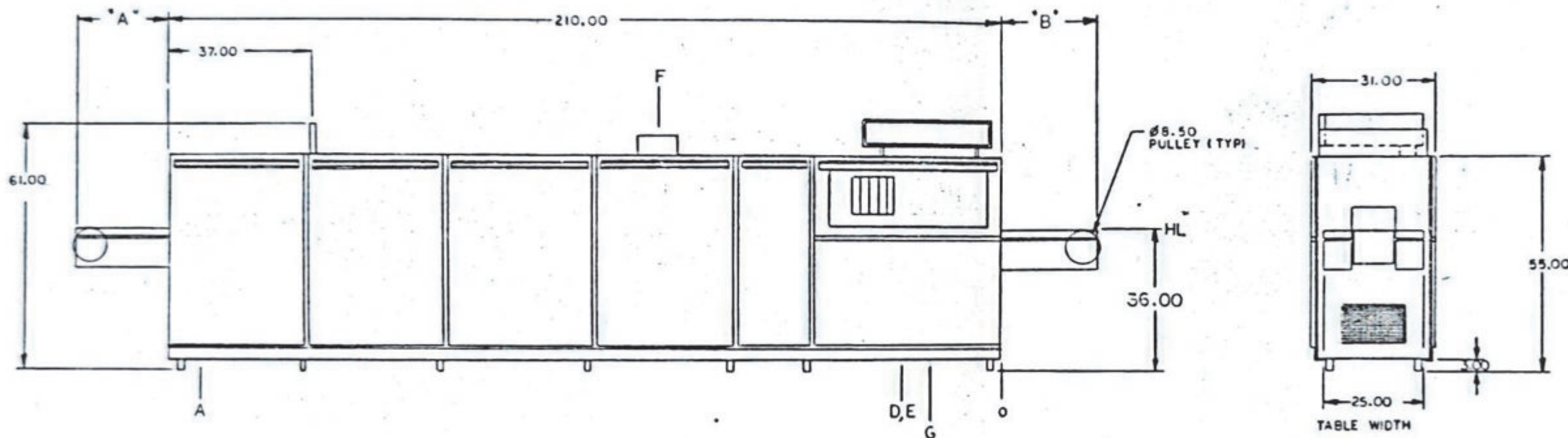
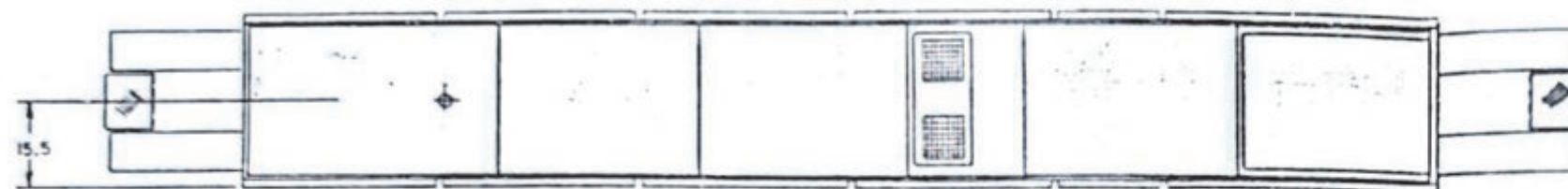
- 1 - Entrance Curtain N₂
- 1 - Entrance venturi N₂
- 1 - Muffle Cover Gas N₂
- 1 - Atmosphere Cooling Jets N₂
- 1 - Exit Curtain N₂

Low Pressure Alarm System with Alarm Silence Switch

Gas sample port located in the middle of Zone 3. Port terminates at needle valve outside of the process chamber.

NOTES:

1. IF CONNECTION TO A CLOSED LOOP
WATER SYSTEM IS REQUIRED
CONSULT FACTORY.



ENTRANCE TABLE OPTIONS

MAX TEMP 2-13 600 41 800 DEGREES CELSIUS

OPERATING TEMPERATURE 200 - 350 DEGREES CELSIUS

PURCHASER TO SUPPLY CIRCUIT BREAKER OR FUSED DISCONNECT FOR
240 VOLTS, 60 AMPERES, 3 POLES, 3 WIRES,
3 PHASES, 21 KILOVOLT-AMPERES, 60 HERTZ
FURNACE CASE MUST BE GROUNDED PER LOCAL CODES

PURCHASER TO SUPPLY CIRCUIT BREAKER OR FUSED DISCONNECT FOR
VOLTS, AMPERES, POLES, WIRES,
PHASES, KILOVOLT-AMPERES, HERTZ
FURNACE CASE MUST BE GROUNDED PER LOCAL CODES

MAXIMUM LOAD DATA TOP AND BOTTOM HEATERS

MAXIMUM LOAD DATA TOP, BOTTOM, SIDE HEATERS

LINE VOLTAGE	BLACK	RED	BLUE	NEUTRAL	TOTAL KV-A
200	43	42	35		14.50
208	45	44	36		16.0
220	47	46	38		17.50
230	49	48	40		19.0
240	52	50	42		21.0

LINE VOLTAGE	BLACK	RED	BLUE	NEUTRAL	TOTAL KV-A
200					
208					
220					
230					
240					

AVERAGE HEATER LOAD 8 KILOWATTS
OVERHEAT T/C'S ZONES 1-4

AVERAGE HEATER LOAD KILOWATTS
OVERHEAT T/C'S ZONES

UTILITY	APPROX CONNECTION LOCATION	PRESSURE	PIPE SIZE
C ELECTRIC POWER	SEE DWG	N/A	N/A
D H2/AR/FG	32	10-20 PSIG	1/2 NPT
E H2	NA	10-20 PSIG	1/2 NPT
F CASE COOLING	79.0	N/A	N/A
G WATER IN	18.5	40-80 PSIG	1/2 NPT
H WATER DRAIN	18.5	OPEN DRAIN	1/2 NPT
J SEP JOINT		N/A	N/A

APPROVALS	DATE	TITLE
DRAWN F. SOLOUKI	8-9-00	INSTALLATION DWG
CHECK		TS94-4-60NS4
ENG.		
PROD.		
SCALE	TRUMP	SHEET 1 OF 1