PROCESS HEATERS
BROACH

THE G. C. BROACH COMPANY – 7667 E. 46TH PLACE – TULSA, OKLAHOMA 74145
TELEPHONE: 918-664-7420 TELEFAX: 918-627-4083

IN STOCK

READY FOR IMMEDIATE DELIVERY

TWELVE

NORTH ATLANTIC TECHNOLOGIES

GAS TO GAS HEAT EXCHANGERS

AS DESCRIBED ON THE FOLLOWING ATTACHMENTS:

1. DATA SHEETS (2 Pages)
2. MECHANICAL SUMMARY (1 Page)
3. DRAWING A-990-PH (1 Page)

THE G. C. BROACH COMPANY

BROACH GAS-TO-GAS PLATE HEAT EXCHANGER DATA SHEET

Customer _____ Date _____
Project _____ Cust. Ref. _____
_____ Broach Ref: _____
_____ Broach Dwgs: _____
Service _____

	PROCESS DESIGN DATA			
	OPERATING CASE	DESIGN		
	AIR SIDE			
	AIR FLOW RATE, Lbs/Hr	65,556		
	INLET TEMPERATURE, Deg. F	62		
	OUTLET TEMPERATURE, Deg. F	447		
	MIN. INLET TEMP., Deg. F			
	INLET VELOCITY, Ft/Sec *			
	OUTLET VELOCITY. Ft/Sec *			
	PRESSURE DROP ALLOW, "WC			
	PRESSURE DROP, CALC. "WC	1.4		
	FLUE GAS SIDE			
	FLUE GAS FLOW RATE, #/Hr	69,120		
	COMPOSITION - N2, Vol %			
	O2, Vol %			
	CO2, Vol %			
	H2O, Vol %			
	AR, Vol %			
	SULFUR IN FUEL Wt %			
	INLET TEMPERATURE, Deg. F	609		
	OUTLET TEMPERATURE, Deg. F	280		
	MAX. INLET TEMP., Deg. F	700		
	MIN. INLET TEMP., Deg. F			
	INLET VELOCITY, Ft/Sec *			
	OUTLET VELOCITY, Ft/Sec *			
	PRESSURE DROP ALLOW., "WC			
	PRESSURE DROP, CALC., "WC	2.7		
	GENERAL DATA			
	HEAT EXCHANGED, MM BTU/Hr	6.13		
	MTD (Corrected) Deg. F	182		
	RATE, BTU/Hr-Ft.2,-Deg. F	4.13		
	HEAT TRANSFER SURFACE, FT.2	8,165		

* BETWEEN PLATES

THE G. C. BROACH COMPANY

BROACH GAS-TO-GAS PLATE HEAT EXCHANGER DATA SHEET

Customer _____ Date _____

_____ Broach Ref: _____

	PROCESS DESIGN DATA			
BLOCK DESIGNATION	All			
DESIGN PLATE TEMP., Deg. F	700			
MIN CALC. PLATE TEMP., Deg. F				
DESIGN PRESSURE DIFFERENTIAL FOR PLATES, "WC	30			
DESIGN FRAME TEMP., Deg. F	300			
PLATE WIDTH, In.	56			
PLATE HEIGHT, In.	155			
PLATE THICKNESS, In.	.060			
WIDTH OF AIR CHANNEL, In.	.500			
WIDTH OF FLUE GAS CHANNEL, In	.4375			
AIR SIDE RIB PITCH, In.	6			
FLUE GAS SIDE RIB PITCH, In.	6			
NO. OF PLATES PER BLOCK	119			
NO. OF BLOCKS	1			
PLATE MATERIAL	Carbon Steel			
RIB MATERIAL Air/Gas	Carbon Steel/Carbon Steel			
FRAME MATERIAL	Carbon Steel			
BOLTS FOR BLOCK CONSTRUCTION				
BOLTS FOR FIELD ERECTION				
OVERALL SIZE,	See Drawing			
HEIGHT, In.				
WIDTH, In.				
LENGTH, In.				
TOTAL WEIGHT, Lbs.				
SHIPMENT				
HEIGHT OF UNIT, In.				
WIDTH OF UNIT, In.				
LENGTH OF UNIT, In.				
WEIGHT PER UNIT, Lbs.				
NO. OF UNITS				

THE G. C. BROACH COMPANY

GAS TO GAS HEAT EXCHANGER PROCESS AND MECHANICAL SUMMARY

Job Number _____ Date _____

* SEE NOTE 1

You specify the new performance and we'll backrate this unit to fit it.

OPERATING CHARACTERISTICS

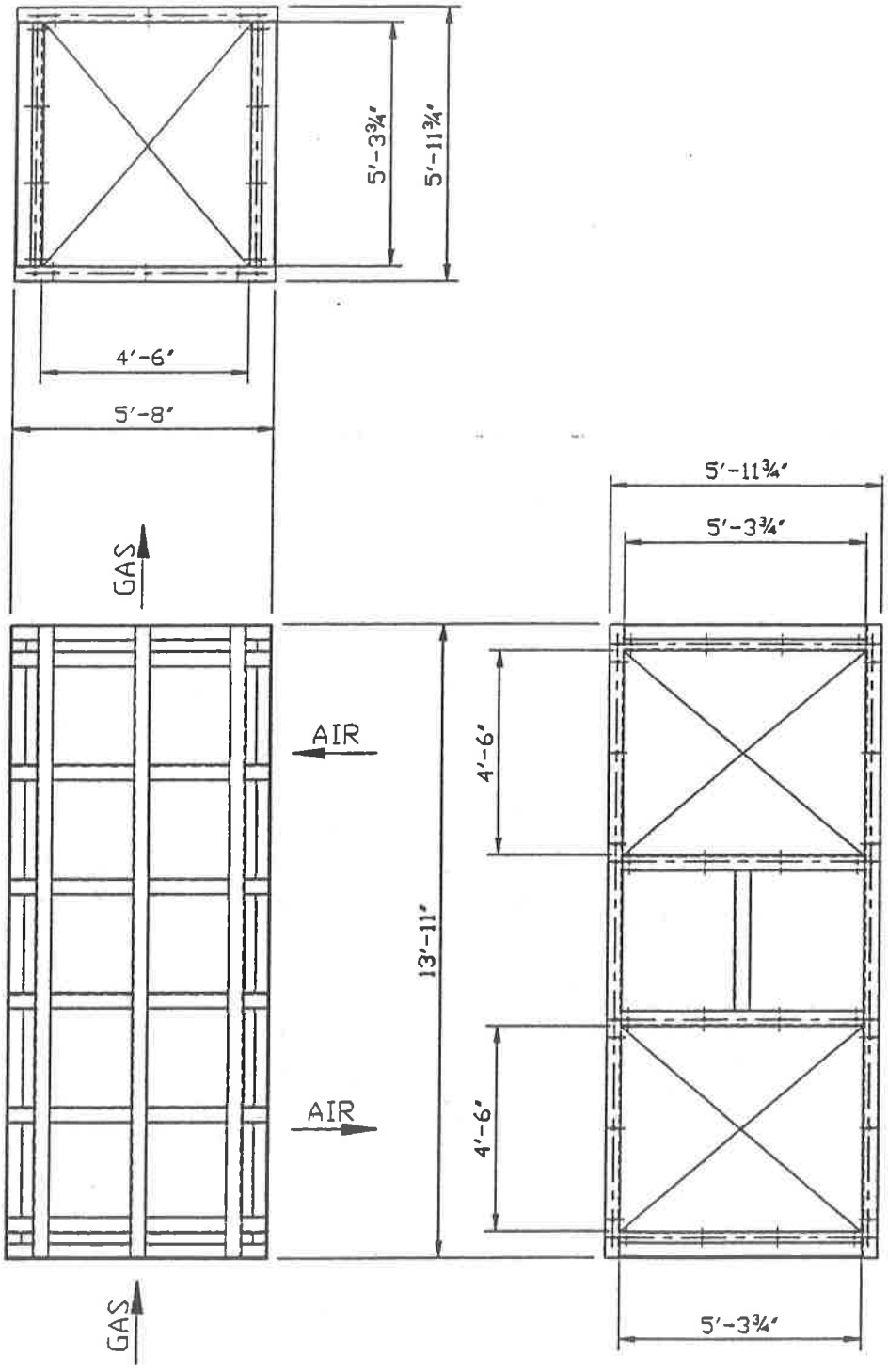
Performance Condition ----------		Design		
Gas Flow	(#/Hr)	69,120		
Gas Inlet Temp.	(Deg. F)	609		
Gas Outlet Temp.	(Deg. F)	280		
Gas Pressure Drop	(" W.C.)	2.7		
Air Flow	(#/Hr)	65,556		
Air Inlet Temp.	(Deg. F)	62		
Air Outlet Temp.	(Deg. F)	447		
Air Pressure Drop	(" WC)	1.4		
Heat Exchanged, (MM BTU/Hr.)		6.13		
Fuel				

MECHANICAL DESIGN

Air Passes - Even or Odd		Even		
Block Designation		Counter Flow		
Design Plate Temp.	(Deg. F)	700		
Pressure Diff - Plate	(" WC)	30		
Plate Width	(Inch)	56		
Plate Height	(Inch)	155		
Plate Thickness	(Inch)	0.06		
Air Gap	(Inch)	0.05		
Gas Gap	(Inch)	.4375		
Number of Plates/Block		119		
Number of Blocks		One		
Heating Surface	(Sq.Ft.)	8,165		
Weight	(Lbs.)	30,200		
Plate Material		C.S.		
Frame Material		C.S.		

* Note 1. Unit can be back-rated for almost any special customized operating conditon.

(dw/f/ds.x.gas.plate)



ESTIMATED SHIPPING WT. 30,200 LBS.

PROCESS HEATERS BROACH

THE G.C. BROACH COMPANY • 7867 E. 46th PLACE • TULSA, OK. 74145

FILE NAME: A-990-PH

AIR PREHEATER MODULE

DWN.	R.L.B.	6/19/92	REV.			APPR.		SCALE	JOB NO. 90990	DWG. NO. A-990-PH	REV NO. 0
CHK.			CHK.			BY		N.T.S.			