







Plasma-Therm, Inc.

700SERIES

Waf'r/Batch

CHAMBER 3

CHAMBER 4

ETCH

DEPOSITION



Panel with multiple control modules:

- Top: Two digital displays with associated controls.
- Second: A large analog waveform display with labels "CH. 1" and "CH. 2".
- Third: A digital display with "FAN SPEED CONTROLLER" and "FAN" labels.
- Fourth: A control section with a large white square, several knobs, and switches.
- Fifth: A module labeled "PROCESSOR-TT SYSTEM" and "ELECTRIC HEATER CONTROL".
- Bottom: Two digital displays with knobs.

Panel with various control modules and wiring:

- Top: A wiring harness and a "STATUS" indicator panel.
- Second: A light green control panel with four sections: "POWER" (ON/OFF), "HEAT" (ON/OFF), "CIRCUIT" (ON/OFF), and "LEAK" (a large rotary knob).
- Third: A large black module with two red digital displays, a central knob, and a red emergency stop button. It includes a label "R" and "OF PLASMA PROCESSOR".
- Bottom: A large black module labeled "PROCESSOR-TT SYSTEM" and "PROCESSOR/HEATER CONTROLLER".

PROCESS
DOCUMENTS FOR
PLASMA DESCUM
OPERATION

700 SERIES WAFER/BATCH
PLASMA/CHAMBER SYSTEM
DUAL CHAMBER
USER'S MANUAL

 Plasma-Therm, Inc.

2-80 Refine Fit



CHAMBER 3

CHAMBER 4



MKS

ON
OFF
PWR10⁻⁶ 10⁻⁵ 10⁻⁴ 10⁻³ 10⁻² 10⁻¹ 10⁻⁶ 10⁻⁵ 10⁻⁴ 10⁻³ 10⁻² 10⁻¹
SETPOINTSON
OFF
REMOTE
DEGAS

SET POINT

ON
POWER

INT

XT

TYPE 252
ANALOG ELECTRIC HEATER CONTROL
MKS INSTRUMENTS, INC.
10000 WATSON BLVD
CHICAGO, ILL. 60644

OPEN

CLOSE

EXT

INPUT
10V
1V
0.1V
SPAN0.5 0.2 0.1 0.05
3 6 9 10 SEC
PHASE LEAD

5 10 20 50 75 95 100% CL

AUTO
OPEN

5.5

Plasma-Therm, Inc.

ELECTRIC HEATER CONTROL

WATLOW



MAN - TUNE

RANGE

SERIES 300

WATLOW



MAN - TUNE

RANGE

SERIES 300



CONTROL

1111111

B

CON



02/06 10

The image shows a detailed view of an electronic test fixture or custom circuit board. It is populated with several rows of connectors and electronic components. The connectors are organized into four main columns, each with a set of yellow and red labels. The labels are as follows:

Column 1 (Leftmost)	Column 2	Column 3	Column 4 (Rightmost)
V23, V26, V25, V24	V19, V18, V17, V16	V12, V11, V10, V9	V7, V6, V5, V4

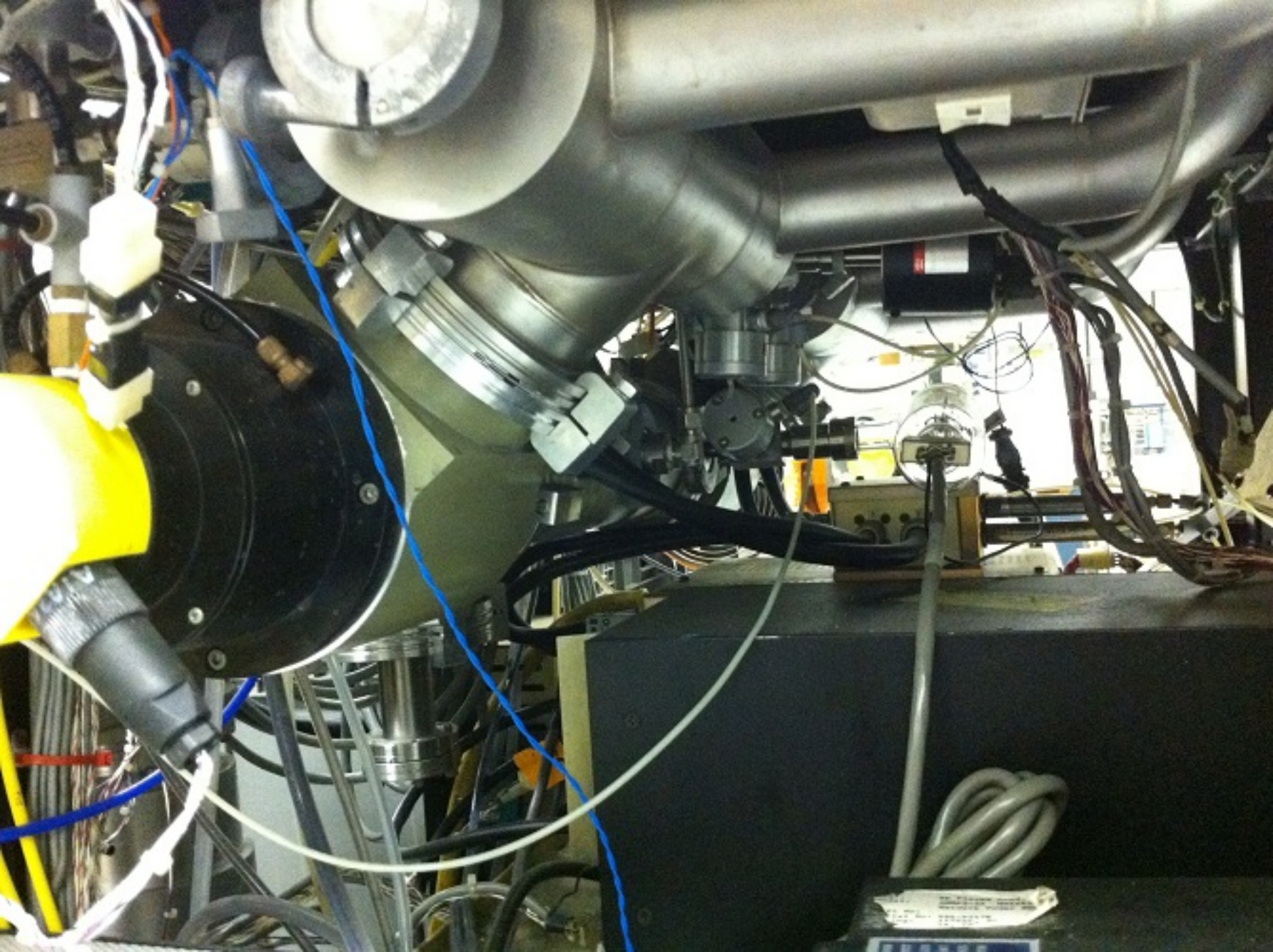
Below the connectors, there are two integrated circuit (IC) chips. The chip on the left is labeled "Allegro 5" and the chip on the right is labeled "Allegro 5". Both chips are connected to the connectors via a network of white and black wires. The wiring is organized into loops and bundles, with some black cables and some white braided cables. The entire assembly is mounted on a yellow PCB, which is housed within a black metal chassis. The chassis has a series of vertical slots at the top, and the assembly is secured with screws.

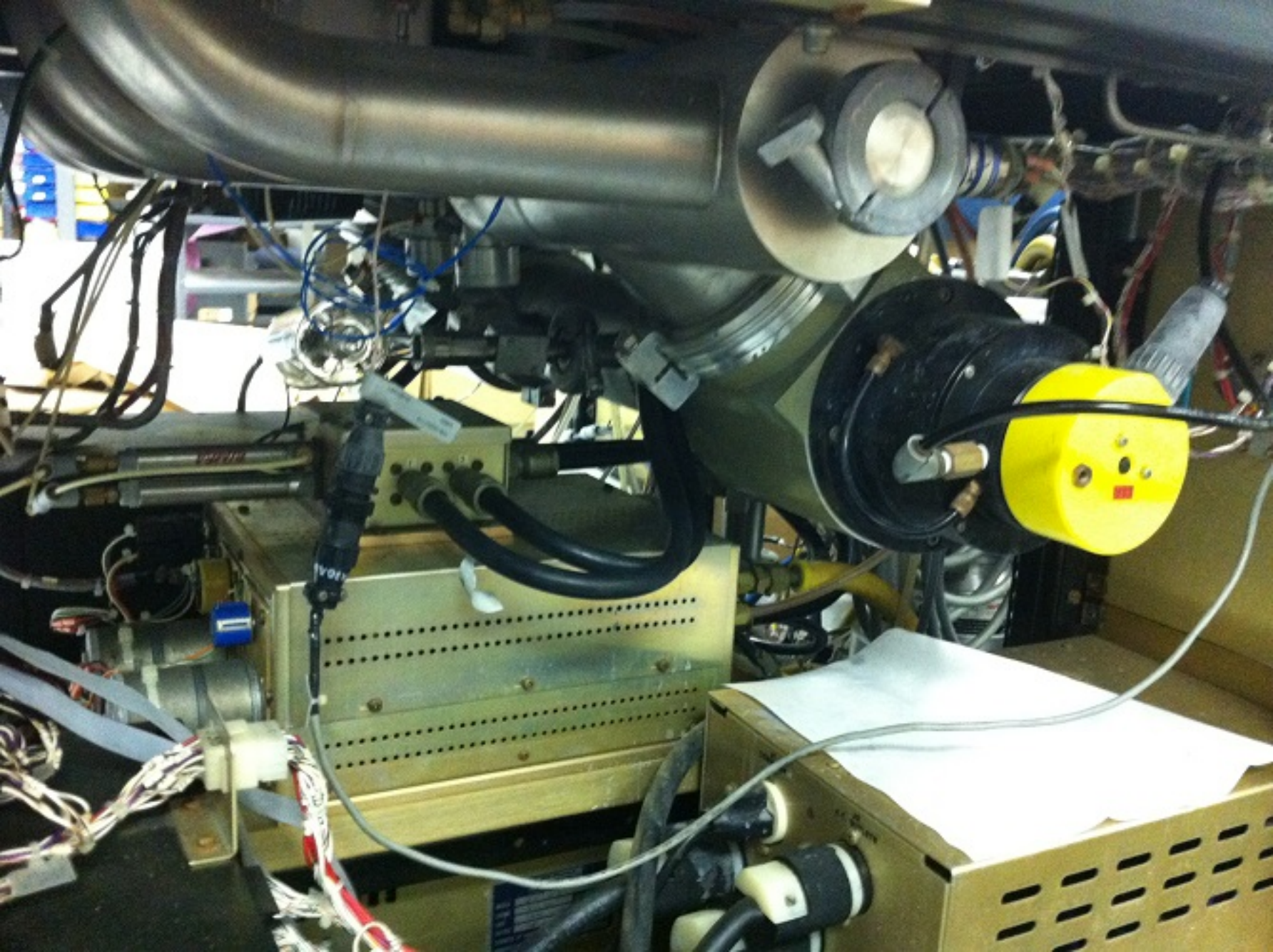
100V
Power

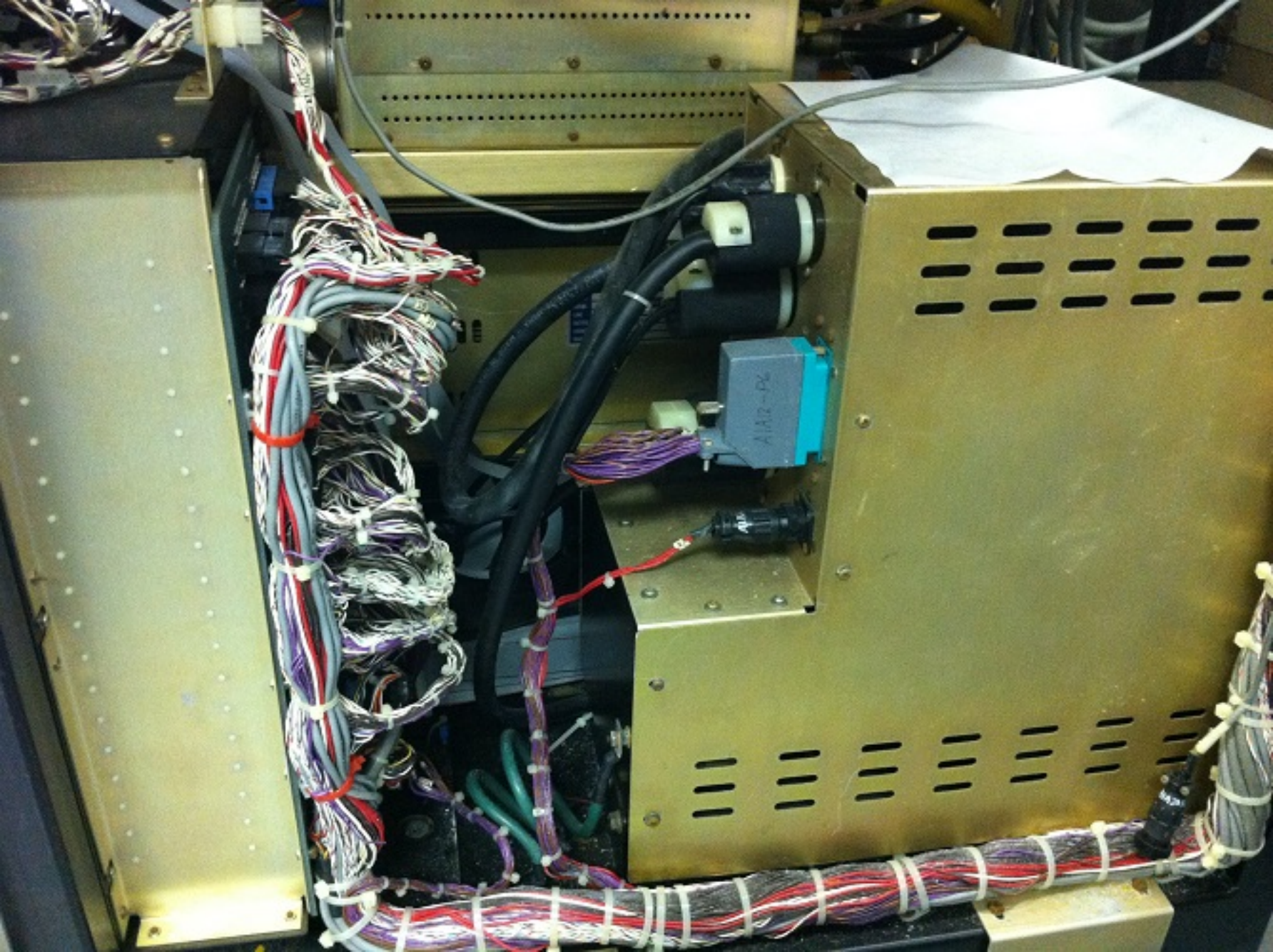


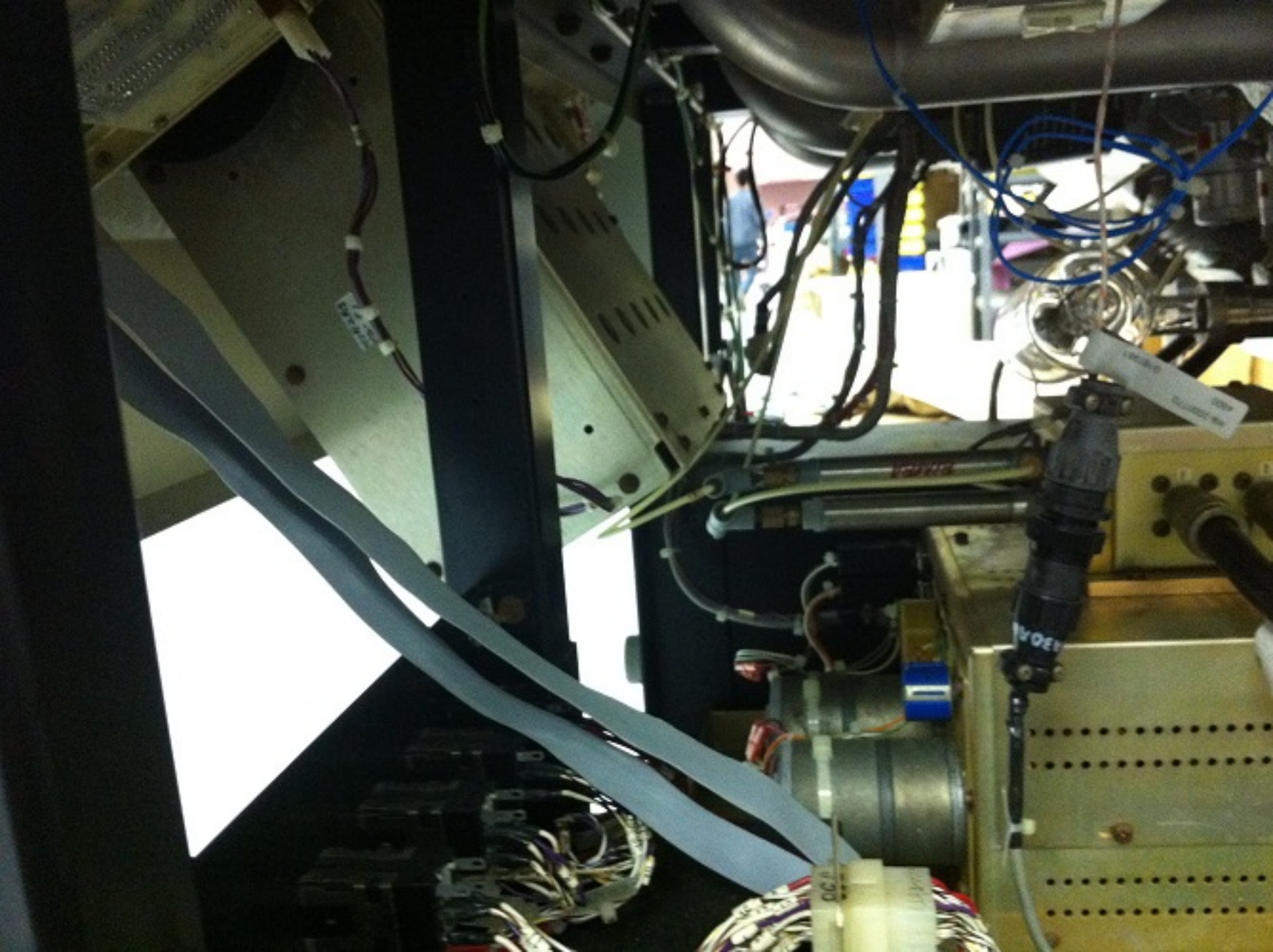
















HEATER

SIGNAL DISTRIBUTION

— CHR R² RELAY — CHARN ELECTRODE GND

ON	RDY	ON	RDY	BLWR	MEDH	ATM	XOVR	TC1	TC2	OPEN	CLSD
CRYO	TURBO			PUMP			PRESS			THROT	

C RO F 480 EL 46 VE IT A
GO ON J PH BLEND

ROUGH ISO FORN ISO ISO ROUGH ISO
CRVO TURBO BLWR CHAMBERS

ON
OFF

ON
OFF

VOLTAGE
CURRENT



STATUS

RF POWER
RF VOLT
RF VOLT
RF VOLT
RF VOLT

CONTROL

RF POWER
RF VOLT
RF VOLT
RF VOLT

POWER SET



RF POWER



MAX POWER

LIMIT

RF POWER
MAX POWER
RF CURRENT

ALARM

RF POWER
MAX POWER
RF CURRENT



 Plasma-Therm, Inc.

PROCESS/SEQUENCE
CONTROLLER

WARNING:
OPERATION OF SYSTEM IS
RESTRICTED TO PERSONS
AUTHORIZED AND PROPER
ALL SYSTEMS MUST BE IN



D96 PL730

Northrop Grumman Permit Information Card			
Plasma Etcher/Deposition		AQMD ID	Vented To
NGID	E_M_PT730	D96	C161 (FS 41)
Manufacturer	Plasma Therm		
Model	PL790		
Conditions	None		
Approved Chemicals	Nitride Dep: CF ₄ , SiH ₄ (2%), NH ₃ (3%), O ₂ , N ₂		
04/12/07			



