



1280 N Red Gum Street Anaheim, CA 92806 • 714-632-1400

## **4000 CFM Makotherm (DG) Thermal-Catalytic Oxidizer / Tank De-Gassing System**

### **Standard Features:**

- Trailer Mounted System
- Dilution / Process Valves
- Centrifugal Fan
- Blower Re-circulation Valve
- 40 Horsepower TEFC Motor
- Oxidizer Chamber
- Flex Hose Storage Racks
- Excess Air Packaged Burner
- Supplemental Fuel Train
- Flame Arrestor
- Digital Temperature Controller
- Digital Dilution Controller
- Pitot Tube / Pressure Transmitter
- Digital Chart Recorder



### **Standard Options:**

Stainless Steel Heat Exchanger • Platinum Coated Catalyst Cell • On Board Generator  
Single Phase System • Trailer Mounted Storage Bins • Remote Telemetry • LEL Monitoring  
UL Listed Electrical Enclosure E306379

### **Standard Performance Specifications:**

Trailer Dimensions = 102" Width x 20' Length x 13' Height

3/16" Heavy Duty Steel Construction Throughout

Electrical Requirement = 208/240 Volt/3 Phase/150 Amp

Electrical Requirement = 208/240 Volt/1 Phase/200 Amp

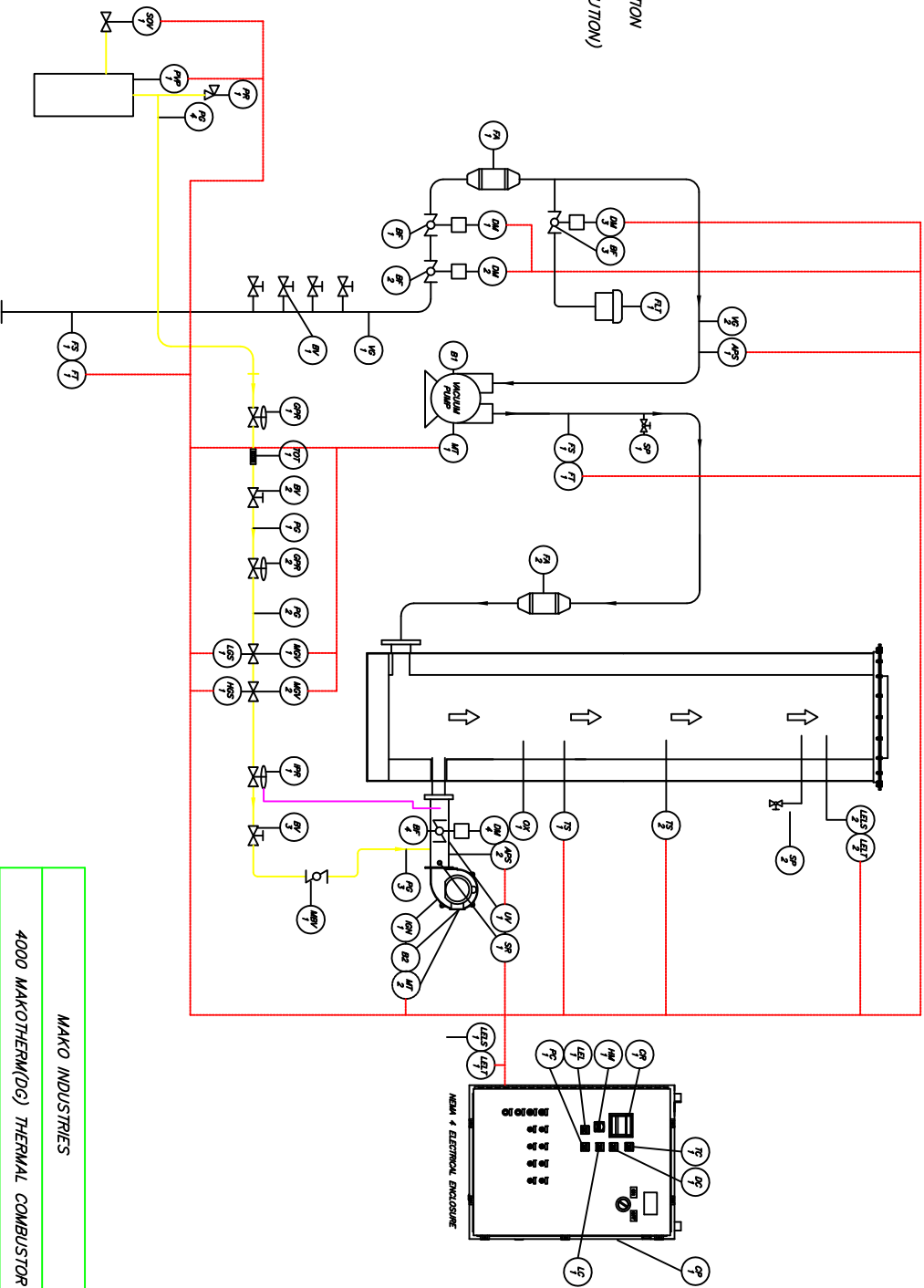
Fuel Requirement = LPG or Natural Gas / 5 PSI / 8000SCFH

Process Flow = 4000 CFM and up to 3" Hg. Vacuum

VOC Loading = 8,000,000 BTU / Maximum

Destruction Efficiency = 98%+

- APS-1 AIR PRESSURE SWITCH – PROCESS  
APS-2 AIR PRESSURE SWITCH – COMBUSTION  
B-1 BLOWER – INDUCED DRAFT FAN (4000CFM)  
B-2 BLOWER – COMBUSTION AIR  
BF-1 BUTTERFLY VALVE – PROCESS (10")  
BF-2 BUTTERFLY VALVE – PROCESS (10")  
BF-3 BUTTERFLY VALVE – DILUTION (8")  
BF-4 BUTTERFLY VALVE – COMBUSTION AIR  
BV-1 BALL VALVE – MANUAL PROCESS (4")  
BV-2 BALL VALVE – MAIN GAS (2")  
BV-3 BALL VALVE – MAIN GAS (2")  
CP-1 CONTROL PANEL – NEMA 4 (48 x 36)  
CR-1 CHART RECORDER  
DC-1 DILUTION CONTROLLER  
DM-1 DRIVE MOTOR – ISOLATION (SPRING RETURN)  
DM-2 DRIVE MOTOR – ISOLATION (PROCESS CONTROL)  
DM-3 DRIVE MOTOR – DILUTION (CONTROL)  
DM-4 DRIVE MOTOR – COMBUSTION AIR  
FA-1 FLAME ARRESTOR (10")  
FA-2 FLAME ARRESTOR (10")  
FS-1 FLOW SENSOR – PITOT TUBE (10") PRE/POST DILUTION  
FT-1 FILTER – DILUTION INLET (8")  
FT-2 FLOW TRANSMITTER – DIFFERENTIAL (PRE/POST DILUTION)  
GR-1 GAS PRESSURE REGULATOR (250 PSI – 10 PSI)  
GR-2 GAS PRESSURE REGULATOR (20 PSI TO .5 PSI)  
HGS-1 HIGH GAS PRESSURE SWITCH  
HM-1 HOUR METER  
IGN-1 IGNITION TRANSFORMER  
IPR-1 IMPULSE REGULATOR  
LC-1 LIMIT CONTROLLER – HIGH TEMPERATURE  
LEL-1 LEL LIMIT CONTROLLER  
LELS-1 LEL SENSOR – AMBIENT AIR  
LELS-2 LEL SENSOR – STACK  
LET-1 LEL TRANSMITTER – STACK  
LET-2 LEL TRANSMITTER – STACK  
LGS-1 LOW GAS PRESSURE SWITCH  
MBV-1 MANUAL BUTTERFLY VALVE (1.5")  
MGV-1 MAIN GAS VALVE (1.5")  
MGV-2 MAIN GAS VALVE (1.5")  
MT-1 MOTOR – PROCESS BLOWER (40HP)  
MT-2 MOTOR – COMBUSTION AIR BLOWER (15HP)  
OX-1 OXIDIZER – THERMAL COMBUSTOR (4000 CFM)  
PC-1 PROCESS CONTROLLER  
PG-1 PRESSURE GAUGE (0-15 PSI)  
PG-2 PRESSURE GAUGE (0-30" WC)  
PG-3 PRESSURE GAUGE (0-30" WC)  
SP-1 SAMPLE PORT – INFLUENT  
SP-2 SAMPLE PORT – EFFLUENT  
SR-1 SPARK ROD  
TC-1 TEMPERATURE CONTROLLER  
TOT-1 TOTALIZER – SUPPLEMENTAL FUEL  
TS-1 TEMPERATURE SENSOR – PROCESS  
TS-2 TEMPERATURE SENSOR – STACK  
UV-1 UV SCANNER  
VG-1 VACUUM GAUGE – PROCESS INLET (0-30 WC)  
VG-2 VACUUM GAUGE – BLOWER INLET (0-30 WC)



MAKO INDUSTRIES

4000 MAKOTHERM(DG) THERMAL COMBUSTOR

PROCESS FLOW DIAGRAM

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DATE 2/22/11 FILE 4000MAKOTHERM.PID

4000 DEGASSING