



4000 CFM MAKOTHERM (DG)

THERMAL-CATALYTIC OXIDIZER / TANK DE-GASSING SYSTEM

1270 N Red Gum St., Anaheim, CA 92806 - 714-630-4491 - www.makoindustries.us

The 4000 Cfm Makotherm (Dg) is a thermal-catalytic oxidizer / tank de-gassing system configured with the standard features and source-verified performance specifications presented below.

STANDARD FEATURES

- Trailer Mounted System
- Dilution / Process Valves
- Centrifugal Fan
- Blower recirculation Valve
- 40 HP 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



AVAILABLE 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

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

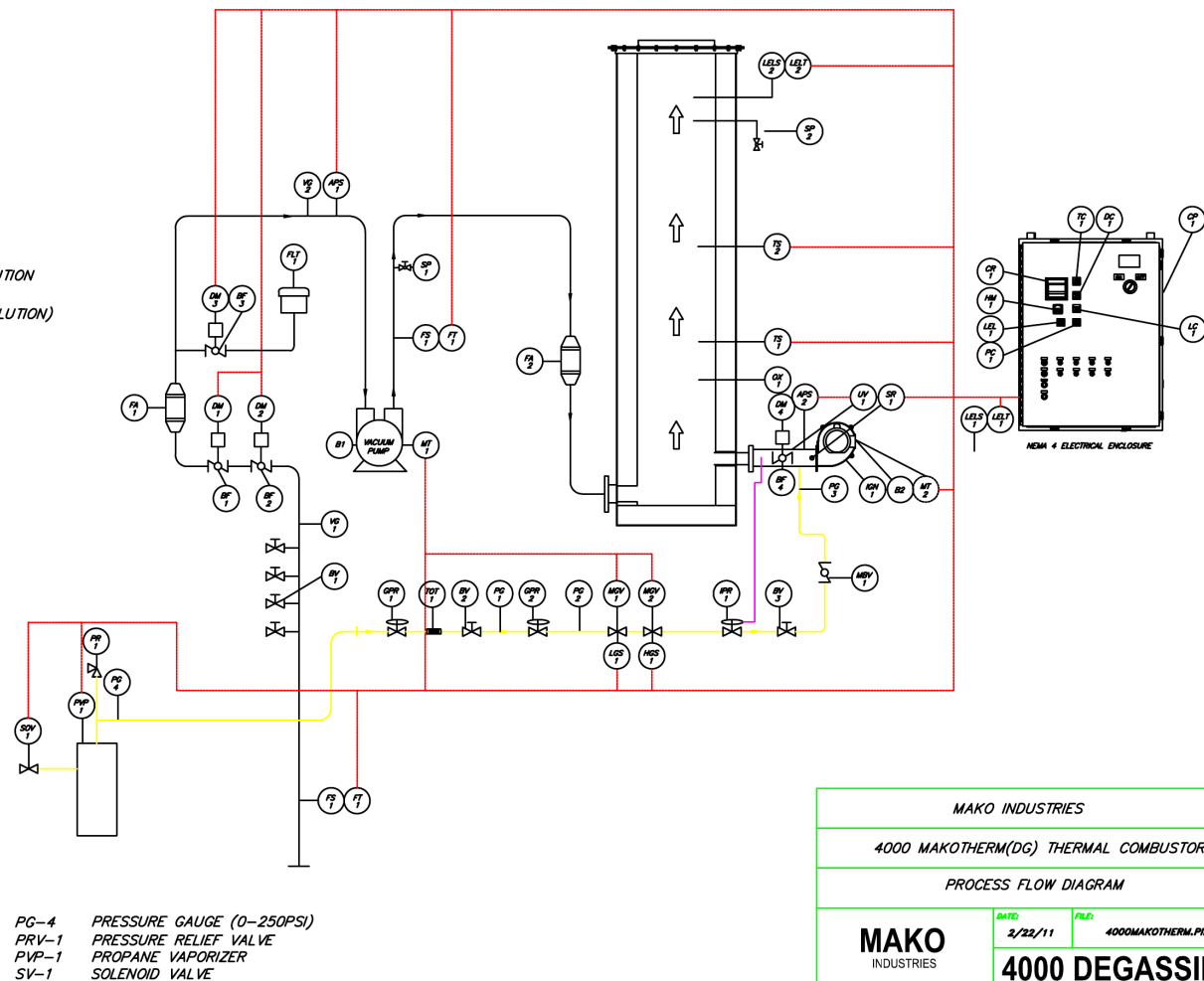
VOC LOADING

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
 FLT-1 FILTER - DILUTION INLET (8")
 FT-1 FLOW TRANSMITTER - DIFFERENTIAL (PRE/POST DILUTION)
 GPR-1 GAS PRESSURE REGULATOR (250 PSI - 10 PSI)
 GPR-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
 LET-1 LEL TRANSMITTER - AMBIENT
 LELS-2 LEL SENSOR - STACK
 LET-2 LEL TRANSMITTER - STACK
 LGS-1 LOW GAS PRESSURE SWITCH
 MBV-1 MANUAL BUTTERFLY VALVE (1.5")
 MG-1 MAIN GAS VALVE (1.5")
 MG-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

MAKO
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DATE:
2/22/11

FILE:
4000MAKOTHERM.PID

4000 DEGASSING