

UNISON SOLUTIONS, INC. SYSTEM DESIGN CHECKLIST



Unison Solutions, Inc. biogas conditioning systems are custom built based on site specific data and customer requirements. This checklist is designed to create a starting point to help set the system parameters for your particular project. Please enter your site specific data to give us the information we need to provide you with an accurate proposal. The checklist is separated into five common design categories:

- INCOMING GAS CONDITIONS
- GENERAL REQUIREMENTS
- SITE CHARACTERISTICS
- ELECTRICAL PARAMETERS
- GAS DELIVERY REQUIREMENTS

CUSTOMER:

PROJECT:

PROJECT LOCATION:



UNISON
SOLUTIONS

UNISON SOLUTIONS, INC.
5451 CHAVENELLE ROAD
DUBUQUE, IA 52002

(P) 563-585-0967

(F) 563-585-0970

sales@unisonsolutions.com

www.unisonsolutions.com

SPECIALIZING IN RENEWABLE ENERGY SYSTEMS

CUSTOMER:

PROJECT:

PROJECT LOCATION:



DESIGN CONCERN #1: INCOMING GAS CONDITIONS	
DESIGN CONSIDERATIONS	DESIGN COMMENTS
Source of the gas (Landfill, Digester)	
Gas Temperature, (maximum/minimum °F)	
Gas vacuum/pressure (inches w.c. / psig)	
Flow rate of gas (scfm)	
Gas Composition (% CH ₄)	
Gas Composition (% CO ₂ , N ₂ , O ₂)	
Gas Composition (ppmv H ₂ S)	
Gas Composition (ppbv siloxanes)	
Relative Humidity (%)	

ADDITIONAL CONSIDERATIONS (NOTES)

CUSTOMER:

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DESIGN CONCERN #2: GENERAL REQUIREMENTS	
DESIGN CONSIDERATIONS	DESIGN COMMENTS
Number of gas conditioning systems required	
Rated capacity of each system (scfm)	
Minimum capacity of each system (scfm)	
Redundancy Required	
Materials of construction required (304, 316, etc..)	
End use Equipment (boiler, engine, turbine, fuel cell)	

ADDITIONAL CONSIDERATIONS (NOTES)

CUSTOMER:

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DESIGN CONCERN #3: SITE CHARACTERISTICS	
DESIGN CONSIDERATIONS	DESIGN COMMENTS
Site altitude (AMSL)	
Ambient temperature maximum/minimum (°F)	
Indoor or outdoor installation	
Space available (W x L x H)	
Any equipment currently installed that will be left in use	

ADDITIONAL CONSIDERATIONS (NOTES)

CUSTOMER:

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DESIGN CONCERN #4: ELECTRICAL PARAMETERS	
DESIGN CONSIDERATIONS	DESIGN COMMENTS
Electrical service available, voltage/frequency	
Necessary approvals, UL/CSA/CE	
Classifications required (Class I, Division 1)	

ADDITIONAL CONSIDERATIONS (NOTES)

CUSTOMER:

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DESIGN CONCERN #5: GAS DELIVERY REQUIREMENTS	
DESIGN CONSIDERATIONS	DESIGN COMMENTS
Pressure from gas conditioning system required (psig)	
Temperature range required, maximum/minimum (°F)	
Relative humidity required (%)	
Contaminant reduction levels, H ₂ S, Siloxanes, CO ₂	

ADDITIONAL CONSIDERATIONS (NOTES)
