

UV System Repair Quote

Project Name:	Oelwein IA
Proposal Number:	GUV012-101054
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Project type	Municipal Wastewater
Type	Vertical open channel
System name	LAVA-30-AM300
Lamp type	Low pressure high output amalgam 320 watt
Flow rate range	



Benefits of VC-A300

- Easy lamp change
- Low pressure high output lamps – 13,000 hours (amalgam)
- No underwater seals
- Flow pacing
- Automatic cleaning

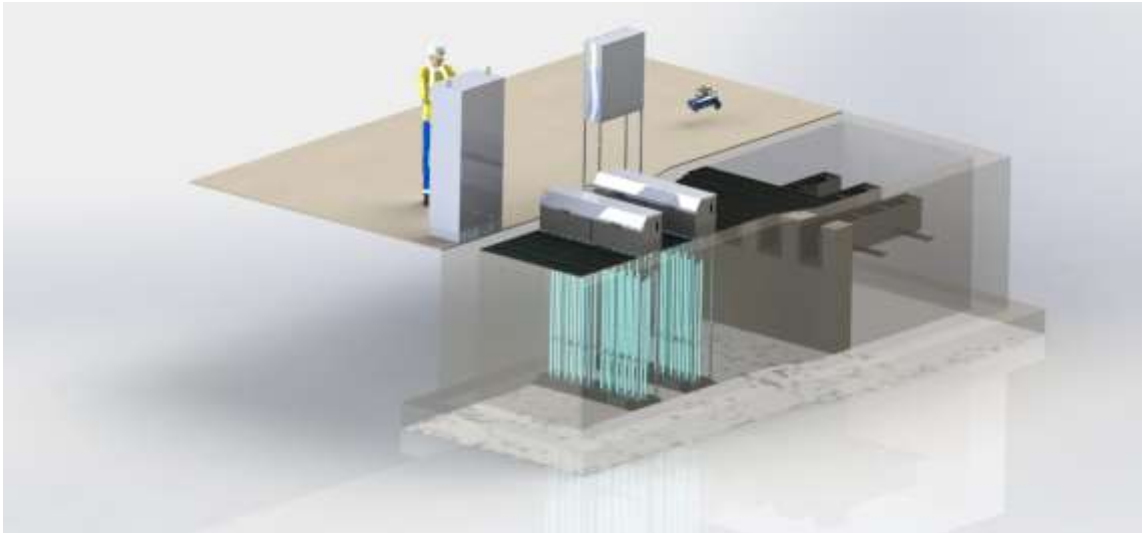
Typical Equipment

- Vertical UV modules
- Ballast Control Center (BCC)
- System Control Center (SCC)-PLC
- Automatic quartz cleaning
- UV monitoring

By others

- Isolation gates
- Integration
- Concrete work





Scope of Supply

<u>Qty</u>	<u>Description</u>
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One (1)	<p>Refurbish existing system. Oelwein will ship the UV system back to Glasco UV. The town pays for shipping to Glasco. The system will be evaluated, and every measure will be taken to return the system to full functionality. The modules will be stripped, cleaned and all worn parts replaced. The power supply including the PLC will be tested and components will be replaced on a per need basis. If a new PLC and or HMI is needed the work will include reprogramming. The air compressor and channel bracketing, or weir do not need to be returned. The town pays for the return shipping.</p>
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One (1)	<p>If the system is deemed to be past the point of fixing, or if the price of the repair exceeds the price of a new system then a new system will be provided to Oelwein. The new UV system will have the same capacity of the existing UV system. Glasco will run the project under our customer loyalty program and deliver the new UV System at a 50% discount.</p>
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New system deliverables

Two (2)	<p>VC-10-A800 Module per channel, a vertical module with automatic cleaning and low-pressure high intensity amalgam lamps. Each module will have 10 lamps organized in 2 groups of 5 lamps. Each bank can be dimmed or shutoff for turndown functionality.</p>
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One (1)	<p>Shared Ballast Control Center (BCC) and System Control Center (SCC) 304 SS air conditioned, modified Nema 4X.</p>
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System Control Center (SCC) Allen Bradley PLC with color touch screen HMI, with bank pacing and Dimming. Lamp status and alarms displayed. Ethernet in/out.

Spares

2	UV Lamps
2	Quartz sleeves
1	Ballasts
5	Seals and wiper rings
1	Operator's kits with face shield
3	Operation Manuals

Commercial Offering

TERMS: Net 30 days 10% upon approved drawings
 80% upon equipment delivery (or upon notification of ready and holding)
 10% upon start-up or within six (6) months from delivery, whichever first

FREIGHT:

SUBMITTAL:

DELIVERY:

SITE START-UP: Included

TRAINING: Included

PRICE: By Haynes

NOTES

1. GLASCO UV's proposes to furnish materials and/or equipment for the above project. Any items not shown above as detailed under 'SCOPE OF SUPPLY', or other attachments to this proposal, are EXCLUDED.
2. Any order resulting from this proposal is subject to the GLASCO UV's Standard Terms of Sale in addition to the following understandings:
 - a. Prices noted will be held valid for a period of 90 days from the date of the proposal.
 - b. Prices are in US Dollars.
 - c. Local or state taxes are not included in this proposal.
3. Please send all purchase orders to Glasco UV, 126 Christie Street, Mahwah, NJ 07430.

Items not included in our scope

- a) Ventilation/air conditioning of shelter for electrical cabinet(s) to maintain indoor temperature below 104 F (if applicable; see actual temperature limit for control cabinet).
- b) Structure above UV modules to protect from direct heat as well as from inclement weather.
- c) Mechanical installation labor for installing equipment, cabling and instrumentation.
- d) Lightning surge protection and electrical ground connection.
- e) Valves for isolation of individual systems for dose pacing and/or maintenance/cleaning purposes
- f) Unloading of components supplied by GLASCO UV.
- g) Placement in storage of all components supplied by GLASCO UV.
- h) All required equipment, labor, analysis, etc. for any on-site biological performance tests that may be required (regular support for operational tests is provided).
- i) Supply and installation of electrical conduit and wiring for power supply and controls of UV system.
- j) Any civil and/or mechanical work required to support or install the UV system or its associated controls. This includes concrete pads.
- k) Power surge protection and lightning strike protection devices to be provided by contractor.
- l) All transformers, circuit breakers and disconnect devices prior to the UV system enclosures are to be provided by electrical contractor (in some cases the transformer is provided by Glasco).
- m) Labor and installation of UV modules, electrical enclosures, compressor and PLC.
- n) Contractor to supply stainless steel anchor bolts for component installation.
- o) Sun shields for all electrical enclosures. This is to prevent thermal gain resulting from exposure to direct sunlight. (Not needed if installed indoors)
- p) If supplied, remote signal communication to the SCADA system including language/protocol conversion software and hardware as

required. Data retrieval of information from the PLCs is the responsibility of the SCADA system provider or integrator. This includes integration of flow signals.

Warranty

The warranty period is 18 months from date of delivery and 12 months from date of the Certification of Substantial Completion whichever comes first. It covers all failures due to defects in material and/or workmanship excluding consumables (see separate lamp and ballast warranties below).

This warranty shall not apply to any failure or defect which results from the Equipment not being operated and maintained in strict accordance with instructions specified in Glasco UV's Instructions Manual or which results from mishandling, misuse, neglect, improper storage, improper operation of the Equipment with other equipment furnished by the Customer or by other third parties or from defects in designs or specifications furnished by or on behalf of the Customer by a person other than Glasco UV. In addition, this warranty shall not apply to Equipment that has been altered or repaired after start-up by any one except:

- Authorized representatives of Glasco UV, or
- Customer acting under specific instructions from Glasco UV.

Customer must notify Glasco UV in writing within 5 days of the date of any Equipment failure. This notification shall include a description of the problem, a copy of the operator's log, a copy of the Customer's maintenance record and any analytical results detailing the problem. If Customer has not maintained the operator's log and maintenance record in the manner directed in the Operation and Maintenance manual, or does not notify Glasco UV of the problem as specified above, this warranty may, in Glasco UV's discretion, be invalid.

Customer will fully cooperate with Glasco UV, in the manner requested by Glasco UV, in attempting to diagnose and resolve the problem by way of telephone support. If the problem can be diagnosed by telephone support and a replacement part is required, Glasco UV will either, at Glasco UV's expense, ship a repaired, reworked or new part to the Customer who will install such part as directed by Glasco UV or will direct Customer to acquire, at Glasco UV's expense, such part from a third party and then install such part as directed by Glasco UV.

This warranty is the exclusive remedy of the Customer for all claims based on a failure of or defect in the Equipment, whether the claim is based on contract (including fundamental breach), tort (including negligence), strict liability or otherwise. This warranty is lieu of all other warranties whether written, oral, implied or statutory. Without limitation, no warranty of merchantability or fitness for a particular purpose shall apply to the Equipment.

Lamp Warranty

Each low pressure, high output lamp is guaranteed for 13,000 hours operating time under normal operating conditions. Normal operating conditions include:

- On/off cycles max. 4 per 24 operating hours,
- Voltage fluctuations according to DIN IEC 38.

In case of premature lamp failure, the client is requested to send the lamp back to Glasco UV together with the information of UV unit serial number, hours run and on/off cycles. Glasco UV then offers the following:

- Lamp failure before 9,000 h: Glasco UV will send a replacement lamp free of charge,
- Lamp failure after 9,000 h: Glasco UV will issue a credit proportional to the hours not used.

Upon return to our facilities in Mahwah, NJ, we will dispose/recycle all used and failed lamps at no charge to the client.