

AMENDMENT NO. 1  
MAINTENANCE SERVICES OF TURBLEX BLOWERS AT WATER RECLMATION  
FACILITIES  
(City of Glendale , Contract No. C22-0166)

This Amendment No. 1 (“Amendment”) to the Maintenance Services of Turblex Blowers at Water Reclamation Facilities (“Agreement”) is made this \_\_\_\_\_ day of \_\_\_\_\_, 2022, (“Effective Date”), by and between the City of Glendale, an Arizona municipal corporation (“City”) and Howden USA Company, a Delaware Corporation doing business as Howden Roots, LLC (Howden), authorized to do business in Arizona (“Contractor”).

RECITALS

- A. City and Howden (“Contractor”) previously entered into Maintenance Services of Turblex Blowers at Water Reclamation Facilities, Contract No. C22-0166, dated February 8, 2022 (“Agreement”); and
- B. Section 4.2 "Change in Scope of Project" allows City and Contractor to modify the scope of the project to include additional services outside the original scope of services; and
- C. City and Contractor wish to modify and amend the Agreement subject to and strictly in accordance with the terms of this Amendment.

AGREEMENT

In consideration of the mutual promises set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the City and Contractor hereby agree as follows:

- 1. **Recitals.** The recitals set forth above are not merely recitals, but form an integral part of this Amendment.
- 2. **Term.** The term of the Agreement is unchanged and shall expire on February 7, 2025.
- 3. **Scope of Work.** The scope of work is amended to include replacement and installation of electrical and communication equipment per Attachment A.
- 4. **Compensation.** The compensation is amended to increase the not-to-exceed amount from \$300,000 to \$1,000,000.
- 5. **Insurance Certificate.** Current certificate will expire on September 30, 2022 and a new certificate applying to the extended term must be provided prior to this date to Materials Management and the Contract Administrator.

6. **Non-discrimination.** Contractor must not discriminate against any employee or applicant for employment on the basis of race, color, religion, sex, national origin, age, marital status, sexual orientation, gender identity or expression, genetic characteristics, familial status, U.S. military veteran status or any disability. Contractor will require any Sub-contractor to be bound to the same requirements as stated within this section. Contractor, and on behalf of any subcontractors, warrants compliance with this section.
7. **No Boycott of Israel.** To the extent A.R.S § 35-393 through § 35-393.03 are applicable, the parties hereby certify that they are not currently engaged in, and agree for the duration of the Agreement to not engage in, a boycott of goods or services from Israel, as that term is defined in A.R.S § 35-393.
8. **Attestation of PCI Compliance.** When applicable, the Contractor will provide the City annually with a Payment Card Industry Data Security Standard (PCI DSS) attestation of compliance certificate signed by an officer of Contractor with oversight responsibility.
9. **Ratification of Agreement.** City and Contractor hereby agree that except as expressly provided herein, the provisions of the Agreement shall be, and remain in full force and effect and that if any provision of this Amendment conflicts with the Agreement, then the provisions of this Amendment shall prevail.

[Signatures on the following page.]

CITY OF GLENDALE, an Arizona  
municipal corporation

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Kevin R. Phelps, City Manager

ATTEST:

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Julie K. Bower, City Clerk (SEAL)

APPROVED AS TO FORM:

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Michael D. Bailey, City Attorney

Howden USA Company  
A Delaware Company doing business as  
Howden Roots, LLC



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By: Darryl C. Halter

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Its: Vice President Aftermarket

# ATTACHMENT A



## Budget Quotation

### Controls PLC-HMI Upgrade

**Proposal to:** Glendale West Area WRF  
**For:** Albert Olmos  
**Site:** S145 Glendale West

**Our reference:** HROLSV.AFM.001546  
**Date:** March 03, 2022

4654 W Junction Street, Springfield, Missouri 65802, USA

**Tel:** 417 380-5777  
**Email:** [matt.mosier@howden.com](mailto:matt.mosier@howden.com)  
**Web:** [www.howden.com](http://www.howden.com)

**Revolving Around You™**



Customer: Glendale West Area WRF  
Project: Glendale West PLC-HMI Upgrade  
Site: S145 Glendale West

Our ref: HROLSV.AFM.001546  
Date: March 03, 2022



# 1. Introduction

This budget quotation is for upgrades on the Howden (Turblex) compressors installed at Glendale West Area WRF (Model KA22SV-GL225, S/N: 4489-90, 1028T, S/N: 6098, 1962T). We look forward to our continued relationship and are pleased to offer this quotation for your consideration.

## Your Howden contacts:

### Technical inquiries:

#### Louis Volpe

Tel: +1 417 380 5682  
Fax: +1 417 866 0235  
Email: [Louis.Volpe@howden.com](mailto:Louis.Volpe@howden.com)

### Commercial inquiries:

#### Matt Mosier

Tel: +1 417 380 5777  
Fax: +1 417 866 0235  
Email: [Matt.Mosier@howden.com](mailto:Matt.Mosier@howden.com)

# 2. Technical specification

## 2.1. Scope:

### Program changes and hardware upgrades for the Master Control Panel (MCP)

- Qty (1) Upgrade PLC from Modicon Quantum to Modicon M340.
- Qty (1) Upgrade HMI from Cutler Hammer PanelMate Model 3985T to 10.4" Magelis HMI.
- Includes electrical engineering for PLC and HMI programming, updating electrical drawings, and software testing at factory.
- Additional parts included but not limited to: plate adapter, patch cables, fuses wire, power supply, ethernet cable DDA, miscellaneous...

### Program changes and hardware upgrades for the Local Control Panel (LCP)

- Qty (3) Upgrade PLC from Modicon Quantum to Modicon M580.
- Qty (1) Upgrade HMI from Cutler Hammer PanelMate Model 3985T to 10.4" Magelis HMI, 1962T.
- Qty (2) Upgrade HMI from Cutler Hammer PanelMate 4000 CRT 45PK to 10.4" Magelis HMI, 1028T.
- Includes electrical engineering for PLC and HMI programming, updating electrical drawings, and software testing at factory.
- Additional parts included but not limited to: replacement door/plate adapter, patch cables, fuses wire, power supply, ethernet cable DDA, miscellaneous...

Customer: Glendale West Area WRF  
Project: Glendale West PLC-HMI Upgrade  
Site: S145 Glendale West

Our ref: HROLSV.AFM.001546  
Date: March 03, 2022



One (1) trip, fourteen (14) eight hour days (Monday – Friday) for installation, start-up, testing, and SCADA coordination.

## 2.2. Notes:

Any significant wear or abnormalities identified requiring extra labor and / or parts shall be billed per Howden's Standard Service Rate Schedule or Price lists. Howden will provide an estimate of additional time and/or materials required.

Onsite installation, start-up, and testing is to be completed in one trip. Any site directives requiring additional trips or onsite time will be billed per Howden's Standard Service Rate Schedule.

This proposal is based on the originally designed and commission Howden Blower System and corresponding O&M manual provided, under project number: 1028T &1962T.

All downstream process control instrumentation will need to be in working order before arrival such that Howden can verify effective and stable process control with the Master Control Panel.

## 2.3. Pricing:

### Upgrade

Total Price for Program Changes and Hardware Upgrades for MCP & LCP (USD)	<b>\$179,632.00</b>
Adder: Classroom Training (1 day)	<b>\$2,200.00</b>

## 2.4. Terms:

30% Upon acceptance of order  
50% Delivery of all parts  
20% Completion of on-site work

Payment terms are 100% of invoiced value and are due net 30 days. Payment shall not be dependent on Contractor being paid by any third parties. This proposal is based on our standard terms and conditions of sale listed below. All provisions of this offer are subject to negotiation and final approval by Howden. Bid validity is until October 28<sup>th</sup>, 2021.

## 2.5. Drawings and Shipment:

Engineering Documents for customer information will be in 10-12 weeks after acceptance of the order by Howden. Shipment will be 12-14 weeks after receipt of release of engineering documents by Howden. Freight to jobsite included, DAP Glendale, Arizona, Per Incoterms 2020.

## 2.6. Items Not Included:

Taxes or bonds, fittings, bolts, nuts, gaskets, additional wiring, wiring outside out Howden equipment, LCP components, disposal or any other items not specifically listed above.

**Customer:** Glendale West Area WRF  
**Project:** Glendale West PLC-HMI Upgrade  
**Site:** S145 Glendale West

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## **2.7. General Request:**

This proposal assumes the site will provide at least one qualified helper to assist the Howden technician.



# Howden Roots LLC Field Service Rates

## HRO-S – US dollars (USD)

\*All intellectual property rights are reserved to HUSA and/or the respective owner(s) (if different).

**Services Provided:**  Inspections  Maintenance  Field Repairs  Balancing  Site Supervision  Project Management  Start Up  Installation Supervision

**A. Rates for service in Continental North America U.S. Dollars (USD):**

Days	Field Service Technician		Engineering Personnel	
Monday thru Saturday (except holidays)	First 40 Hours	\$175/hour	First 40 Hours	\$270/hour
	Over 40 Hours	\$265/hour	Over 40 Hours	\$400/hour
Sunday, and locally recognized holidays	All Hours	\$350/hour	All Hours	\$540/hour

**B. Rates for service outside Continental North America U.S. Dollars (USD):**

Days	Field Service Technician		Engineering Personnel	
Monday thru Saturday (except holidays)	First 40 Hours	\$210/hour	First 40 Hours	\$280/hour
	Over 40 Hours	\$320/hour	Over 40 Hours	\$425/hour
Sunday, and locally recognized holidays.	All Hours	\$425/hour	All Hours	\$560/hour

**C. Service and Travel Standards (USD)**

1. The minimum time off for a person during any 24-hour period must be ten (10) consecutive hours.
2. Travel time, whether during first 40 hours or over 40 hours, will be invoiced at the Monday through Saturday Field Service Technician rates in Tables "A" & "B". Travel in Continental North America is invoiced actual travel time with a maximum of ten (10) hours each day. Travel outside Continental North America is invoiced actual travel time. Actual travel time on holidays or to the jobsite on Sundays will be at the Field Service Technician Sunday and Holiday rate in Tables "A" & "B"
3. Standby time at job site, locally on call, training, or meetings will be invoiced as time worked and be based on Tables "A" & "B". Weekend waiting rate will be 8 hours per day invoiced at the Field Service Technician first 40 hour rate in Tables "A" & "B".
4. Rates apply from time and date of departure home base to time and date of return home base.
5. When a project is expected to exceed 5 continuous weeks, then after 3 weeks the Buyer will allow an extended weekend leave or rotation of personnel. Travel fees shall be by Buyer.
6. Air travel on flight segments exceeding 12 hours will be business class and shall be paid by Buyer. Air travel on flight segments exceeding 4 hours will be premium economy and shall be paid by Buyer.
7. Payments shall be in U.S. funds unless otherwise agreed in writing
8. Rates quoted are subject to adjustment without notice to conform to Seller's published rates in effect at the time service is performed.
9. Howden may offer a priority service when the relevant Howden personnel are available, for emergency or breakdown callouts. An additional 30% of the applicable labor rate will be charged where Howden personnel are requested and able to be mobilized within 24 hours of the request being received.

**D. Expenses (USD)**

1. Meals will be \$65/day per diem to be charged from the day of travel start to the day of travel end.
2. Lodging, incidental expenses, transportation to and from the city nearest the jobsite, plus local transportation will be invoiced at cost plus 20% administrative fee. Receipt(s) to be provided when any expense exceeds \$60.00.
3. Transportation to and from the city nearest the jobsite, plus local transportation will be charged at cost plus 20% administrative fee. The mileage allowance for personal car use will be current U.S. government rate per mile.
4. Tool usage, when required, will be charged at a rate of \$350 per trip.
5. Expenses for Airline travel shall be charged at cost Plus a 20% administrative fee (Administrative fee shall not exceed \$500).

**E. Terms and Conditions**

The sale of services by Howden Roots LLC ("Seller") is subject to Seller's Terms for Sale of Goods and if such terms differ in any way from Buyer's order, or if such terms are construed as an acceptance or confirmation acting as an acceptance, then Seller's acceptance is expressly made conditional on Buyer's assent to any terms or conditions contained in Seller's terms that are different from or additional to those contained in Buyer's writing. Further, this quote shall be deemed notice of objection to such terms and conditions of Buyer. If this quote is construed as the offer, acceptance of same is expressly limited to the terms and conditions contained herein. In any event, Buyer's order of the services shall constitute and manifest Buyer's assent to Seller's Terms for Sale of Goods.

**Howden Roots LLC**  
**Standard Terms and Conditions of Sale**



**1. DEFINITIONS; SCOPE** - "Buyer" means the issuer of the purchase order and its attachments. "Seller" means Howden Roots LLC.; "Order" means Buyer's purchase order/contract, these terms and conditions of sale, Seller's acceptance and other attachments mutually agreed upon by the parties. "Goods" means the specified drawings, goods and parts as described in Seller's quotation/bid, this Order, and its attachments; "Services" means the specified supervision, testing, repair, or other services of Seller as described in Seller's quotation/bid, this Order, and its attachments. Delivery and scope of supply shall be based upon Seller's quotation/bid and any expressly agreed upon changes.

**2. ACCEPTANCE** - Buyer's acceptance of any Goods or Services from Seller shall constitute full acceptance of Seller's quote and these terms and conditions. These terms and conditions take precedence over Buyer's terms and conditions to which notice of objection is hereby given. No terms or conditions in Buyer's order shall be binding upon Seller unless specifically agreed to in writing by Seller. Neither Seller's commencement of performance or delivery shall be deemed as acceptance of Buyer's terms and conditions.

**3. TESTING AND INSPECTION** - If specified in the Order, Seller will conduct testing and/or inspection or review(s) by Buyer of the Goods or Services at Buyer's risks and costs. Buyer will receive written notice at least three (3) business days prior to such testing/inspection/review(s). If Buyer waives attendance or fails to attend, any testing/inspections/reviews will be deemed to have been made in Buyer's presence.

**4. TITLE & RISK OF LOSS** - Unless specified in the Order, Goods are being purchased EXW (Origin/Factory), Incoterms 2010. Title and risk of loss shall transfer to Buyer upon delivery to the agreed upon Incoterms point (or when delivery should have taken place but for fault of Buyer). Buyer agrees to document (with photos) and promptly advise Seller of any damage or freight claims. Goods that are not promptly and properly rejected by Buyer upon delivery shall be deemed irrevocably accepted; accepted Goods shall be subject to Seller's warranty herein.

**5. WARRANTY** - Seller warrants that: (i) the Goods will be of good material and workmanship; (ii) the Services shall be performed by competent and qualified personnel in a professional and workmanlike manner in accordance with generally established industry standards; and (iii) the Goods and Services will conform to the technical specifications and/or drawings expressly agreed upon between the parties in writing. Seller's warranties on the Goods will be in effect until the earlier of: (i) twelve (12) months from first operation/use of any such Goods or (ii) eighteen (18) months after date of delivery (at the applicable FOB/Incoterms point quoted by Seller). Seller's sole liability and Buyer's sole and exclusive remedy for breach thereof shall be the repair or replacement of such Goods by Seller, at Seller's option and cost (but not including transportation, removal, reinstallation, and decontamination). Seller's warranties on the Services will be in effect until ninety (90) days from the date of the performance of such Services. Seller's sole liability and Buyer's sole and exclusive remedy for breach thereof shall be the re-performance of such Services by Seller. Any warranty repair/replacement/re-performance pursuant to the above warranties shall be warranted by Seller for a period equal to the remainder of the original warranty period set forth above. No "evergreen" or "in-place" warranty is being provided. Seller shall have the sole right to specify the manner and timeframe for such repair/replacement/re-performance. Defective/non-conforming parts(s)/Goods must be returned to Seller free of all contaminants and, in the event of replacement, will become the property of Seller unless Seller instructs otherwise. The warranty does not include the costs of fitting new parts or other Equipment. If Seller opts to perform any warranty obligations in-place, Buyer shall, without cost to Seller, during a specified time period agreed upon by the parties, provide access by disassembling, removing, replacing, and reinstalling any equipment, structures, or other obstructions to the extent necessary to permit Seller to perform its warranty obligations.

**THERE ARE NO WARRANTIES, CONDITIONS, GUARANTEES, REPRESENTATIONS, OR REMEDIES THAT EXTEND BEYOND THE FACE OF THESE TERMS AND CONDITIONS. ALL OTHER WARRANTIES, CONDITIONS, GUARANTEES, REPRESENTATIONS, OR REMEDIES EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE (INCLUDING ANY CONDITION OR WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE) NOT EXPRESSLY SET FORTH HEREIN, ARE FULLY DISCLAIMED AND EXCLUDED TO THE FULLEST EXTENT PERMITTED BY LAW. SELLER'S WARRANTIES DO NOT COVER ANY GOODS OR SERVICES THAT HAVE BEEN ALTERED OR SUBJECTED TO ACCIDENT OR IMPROPER STORAGE, INSTALLATION, ASSEMBLY, COMMISSIONING, MAINTENANCE, USE OR APPLICATION. SELLER DOES NOT WARRANT THAT THE GOODS WILL RESIST THE ACTION OF EROSION OR CORROSIVE GASES, LIQUIDS, OR SOLIDS, OR PRODUCE RESULTS IN COMPLIANCE WITH ANY LAWS, DECREES, OR OTHER STANDARDS.**

**6. INSTALLATIONS AND ASSEMBLY** - Unless specified in the Order, Seller is only the supplier of the Goods and shall have no responsibility for the assembly and installation of the Goods

**7. INTELLECTUAL PROPERTY** - Seller's intellectual property rights and proprietary information (in hard copy or in electronic format) remain the property of Seller. Notwithstanding any other provisions or requirements of this Order, no intellectual property or proprietary information is being sold, granted, transferred, licensed, or assigned; there are no works-made-for-hire or unrestricted use (any government rights shall be "limited rights"). Seller shall not be required to provide, or provide access to, any confidential or proprietary area or information. Buyer shall not reverse engineer or otherwise attempt to re-create the Goods/Services.

**8. PATENT INDEMNITY** - Except (i) to the extent of designs or other intellectual property provided by Buyer and/or (ii) to the extent that Goods are altered or combined by Buyer in a manner causing the infringement, Seller will indemnify Buyer from claims by third parties against Buyer if the Goods infringe any Canadian or United States patent. If an injunction is issued against the further use of the Goods, Seller will, at its option and expense: (i) procure for Buyer the right to continue using said item of Goods; or (ii) modify or replace the same with non-infringing Goods or (iii) remove the infringing Goods and refund the purchase price.

**9. BUYER MATERIALS** - Buyer-furnished material must be received by Seller in accordance with the delivery schedule agreed upon by both parties. If shipment of such material is delayed or lost, Seller reserves the right to: (i) invoice and hold shipment awaiting such material or (ii) invoice and ship less such material. Buyer shall reimburse Seller for all liability incurred by Seller as a result of any such Buyer delay.

**10. ON-SITE SERVICES** - The following section shall apply only if Seller provides on-site Services to Buyer under this Order:

**10.1 Indemnity of Buyer.** Seller will indemnify Buyer from non-nuclear claims brought by third parties against Buyer for (i) bodily injury (including death) and (ii) property damage, each only to the extent directly caused by the negligence of Seller. Seller shall not be responsible for the acts/omissions of Buyer or others. Seller's indemnity obligations shall not apply to Buyer property or any nuclear activity/incident.

**10.2 Insurance.** Seller shall maintain the following insurance coverage: (1) Commercial General Liability with limits of \$1,000,000 combined single limit occurrence for Bodily Injury, Physical Property Damage of third party property, and Contractual Liability coverage, subject to an annual aggregate of \$2,000,000; (2) Automobile Liability - Bodily Injury/Physical Property Damage in the amount of \$1,000,000 combined single limit each occurrence; and (3) Workers Compensation Insurance - statutory, as to Seller's employees. If requested, Seller will provide an ACORD form of certificate confirming such coverage. Seller's provision of a certificate of insurance in accordance with Buyer's site requirements does not constitute Seller's acceptance of Buyer's terms of purchase. Seller shall have no other or further obligations related to insurance or coverage.

**10.3 Other On-site/Service Provisions.** Seller shall comply with applicable Canadian, U.S. and/or provincial/territorial/state statutes, acts, ordinances, regulations, codes, and laws that apply to Seller's performance of the Work. Seller shall comply with job/site requirements as mutually agreed upon by the parties. Seller is an independent contractor and is not responsible for oversight or supervision of work, property or employees of others, including health, safety, or security. Buyer shall advise Seller's personnel in advance of all known and/or suspected hazardous/unsafe conditions and risks that may be encountered while on-site, including proper Material Safety Data Sheets (MSDS). Seller's personnel shall not be required to take any action, or to enter or

remain in any area where he/she reasonably determines that it would be unsafe. Seller's employees, subcontractors, and representatives shall be given unobstructed access to the site and the work. Seller's time and expense for any delays not caused by Seller shall be charged to Buyer. Buyer shall be responsible for any damage to or loss of property of Seller or its subcontractors property if such damage/loss is not caused by Seller or its subcontractors.

**11. FORCE MAJEURE; SHIPMENT AND DELAYS** - Seller shall not be liable for damages or delay in performance arising from causes beyond its control or without its fault or negligence, including, but not limited to, acts of God or the public enemy, acts of a government in its sovereign capacity, fires, floods, disease outbreak or epidemic and/or any resulting quarantine restrictions, strikes, freight embargoes, and/or severe weather. If Buyer requests that Seller store Goods or if delivery instructions are not promptly received from Buyer upon Seller's ready-to-ship notification, Seller may provide for storage of the Goods at Buyer's risk and expense or Buyer must provide for storage at Buyer's cost and risk. Shipments held beyond the scheduled date at the request or fault of Buyer may be billed immediately to Buyer including reasonable expenses incident to such delay, and Buyer shall assume title and risk of loss thereof. Liquidated/delay damages shall not apply to this order.

**12. TAXES & DUTIES** - Buyer shall be responsible for all sales, use, value added and similar taxes ("Sales Taxes") required on the Goods and Services, which shall be in addition to the consideration payable for such Goods and Services. If Seller invoices Buyer for such Sales Taxes, then Buyer shall pay such amounts to Seller concurrent with the payment of the consideration upon which such Sales Taxes are calculated. If Seller does not invoice Seller for such Sales Taxes, Buyer shall report and remit such Sales Taxes directly to the appropriate taxing authority within the time period required by law and shall provide evidence of such remittance to Seller upon request. Buyer shall be responsible for all import, export, customs duties, fees and similar charges ("Duties") in respect of the Goods and Services, and if Seller is required to pay any amount of Duties in respect of the Goods and Services, then Buyer shall reimburse Seller for such amount upon request.

**13. PAYMENT OF PURCHASE PRICE** - Buyer shall pay all invoices within thirty (30) days from the date of Seller's invoice ("Payment Due Date") by electronic funds transfer (EFT) or automated clearing house (ACH) transaction. If Buyer disputes all or part of an invoice, Buyer must (i) submit the dispute to Seller in writing within five (5) business days of the date of invoice or the entire amount of the invoice shall be due on the Payment Due Date; and (ii) pay all undisputed amounts on the Payment Due Date. If Buyer fails to pay an undisputed invoice on or before the Payment Due Date, Seller reserves the right to (i) charge late fees at the lesser of (i) the rate of 1.5% per month (18% per annum) or (ii) the maximum amount permitted by law; (ii) require Buyer to pay all of Seller's collection costs; and (iii) cease all work in relation to this Order (without obligation for liquidated damages, if applicable, incurred due to such cessation).

For milestone payments required under this Order, Seller may invoice on the original milestone completion date if the milestone is not met due to Buyer's fault, untimely response or unreasonable delay. In the event that Buyer seeks to modify the Purchase Order, Buyer agrees to make payments in accordance with the original contract terms until such time as modification is mutually agreed upon. Seller only waives claims for payment to the extent that such payments have been received by Seller. If, in Seller's reasonable opinion, Buyer's financial condition may jeopardize full or timely payment, Seller may (i) require full or partial payment as a condition to commencing or continuing its performance (including in advance of any shipment) or (ii) recover Goods from the carrier, if shipment has been made.

**14. CANCELLATION** - Buyer may cancel this Order, in whole or in part, upon at least seven (7) calendar days advanced written notice to Seller in such case the Seller shall be entitled to be reimbursed for the reasonable Direct Cost incurred by the Seller in performing the work. Direct Costs mean: "such direct costs borne and incurred by the Seller associated with the Order up to and including the date of suspension and/or cancellation, including but not limited to manufacturing costs, salaries, third party supplier costs and reasonable overhead and profit margin." Buyer's cancellation costs shall not exceed the total Order price. Any Goods or Services sold by Seller that are incomplete shall be deemed to be sold "AS IS," "and "WITHOUT WARRANTY OR GUARANTEE OF ANY KIND." Seller may cancel this Order, in whole or in part, at any time if: 1) Buyer suspends work or delays delivery beyond 45 days without it being mutually agreed upon in advance; 2) Buyer breaches any material term of this Order; and/or 3) Buyer files bankruptcy or otherwise fails to either make full and timely payments, meet its obligations, or provide further assurances.

**15. EXPORT CONTROL**- Goods supplied may be subject to export control, trade sanctions, or other export laws, regulations, rules and licenses of Canada, the United States or other countries ("Export Control Regulations"). Buyer agrees to comply with Export Control Regulations as well as any other applicable country's import control laws. Buyer further agrees that if Export Control Regulations are applicable, it will not disclose or re-export any technical data received under this order to any countries for which the United States government requires an export license or other supporting documentation at the time of export or transfer, unless Buyer has obtained prior written authorization from the United States Office of Export Control or other authority responsible for such matters. Unless otherwise mutually agreed upon by the parties, Buyer shall be responsible for obtaining export licenses or other approvals. The Order will not be accepted unless Seller is satisfied that the Goods can be supplied in compliance with the Export Control Regulations. In the event that any applicable Export Control Regulations prohibit or make impracticable Seller's performance hereunder, Seller will be released from all performance related to the Order. Seller will not be liable to Buyer for any losses, damages, or claims arising from such cancellation of the Order. Seller will not accept payment through a trade sanctioned country financial institution.

**16. NUCLEAR SALES (IF APPLICABLE)** - If Buyer or any ultimate end user intends to use the Goods or Services in any atomic/nuclear installation or activity, Buyer must notify Seller accordingly in advance and Seller's "Nuclear Indemnity" shall also apply and control (and such terms are hereby incorporated by reference for such purposes, as if fully set forth herein).

**17. LIMITATION OF LIABILITY; INDEMNITY CONDITIONS; EXCLUSIVE REMEDIES; OBLIGATIONS; & VALIDITY** - The following shall apply, govern, control, and survive at all times and to the fullest extent permitted by law.

17.1 Seller shall not be liable for any loss of profit or revenue, loss of business, loss of contracts, or for any special, indirect, economic, incidental, consequential, or punitive damages or losses, whether based on contract, warranty, indemnity, statute, tort (including negligence), or otherwise pursuant and/or related to this Order.

17.2 Seller's total liability pursuant and/or related to this Order whether for breach of contract or by reason of any tort (including negligence), statute, warranty, indemnity, or otherwise, shall in no event exceed the total price of the Order.

17.3 Any duty to indemnify under these terms and conditions/the Order is conditioned upon Buyer: (i) providing prompt and detailed notice to Seller of any such claim; (ii) tendering the defense/settlement to Seller; and (iii) providing full cooperation, authority, and assistance to Seller.

17.4 Buyer's rights and remedies shall be deemed sole and exclusive, and in place of those at law and equity. The exclusions and limitations set forth in these terms and conditions shall control at all times and survive any breach, or termination of the Purchase Order. If any provision of these terms and conditions of this Order or part thereof shall be held by judicial determination to be invalid or unenforceable they shall be severed from this Order and the valid or enforceable parts of these terms and conditions shall continue in full force and effect.

**18. ENTIRE CONTRACT; GOVERNING LAW & FORUM; OFFICIAL LANGUAGE; NO THIRD PARTY BENEFICIARIES; ASSIGNMENT** - These terms and conditions of sale cannot be amended, superseded, or modified except by a written document signed by Seller's duly authorized officer and Buyer's duly authorized representative. Governing law and forum of the terms of this Order shall be the laws (and exclusive forum) of the State of New York (USA), despite any conflicts of laws. The official language of this Agreement is English. It is the express wish of the parties that this Agreement and any related documents be drafted and executed in English. The parties agree to exclusive venue in Erie County, New York. Buyer and Seller agree that this Order is between them alone, and there are no third party rights or beneficiaries. Seller may subcontract with third parties for the manufacture and/or purchase of all or part of the Goods and/or Services. Other than Seller's ability to use its vendors/subcontractors, neither party may transfer or assign this Order, in whole or in part, without the other party's express advance permission (which shall not be unreasonably delayed or withheld), and any assignment/transfer without proper consent shall be null, void, and of no force or effect. The parties expressly exclude the application of the United States Convention on Contracts for the International Sale of Goods.



## Procurement Sole Source and Special Procurement Request

(ONCE FORM IS COMPLETED AND SIGNED BY DIRECTOR, PLEASE SEND TO YOUR PROCUREMENT LIASON)  
**REQUESTOR INFORMATION:**

Requestor: Julie Ossege	Date: 10-11-2021	Department: Water Services
Phone Number: 620.930.4118	Email Address: jossege@glendaleaz.com	
Return To: jossege@glendaleaz.com		

**PROPOSED VENDOR INFORMATION:**

Proposed Vendor: Howden USA Company	Proposed Vendor Contact: Jorge Parada
Proposed Vendor Address: 4654 W. Junction Street	
City, State and Zip Code: SpringField, MO 65802	
Vendor Phone: 417.864.5599	Vendor Fax:
Procurement method requested:	<input checked="" type="checkbox"/> Sole Source <input type="checkbox"/> Special Procurement

**PURCHASE INFORMATION:**

Total Cost of this Order: 1,000,000/ 3-year	One time purchase: Yes <input type="checkbox"/> No <input type="checkbox"/> Federal Money: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, explain funding source:
contract Org #: Multi / Object #: 525220 /	
Description of the product or service requested: Class II Services for six (6) Turblex Blowers at the West Area and Arrowhead Water Reclamation Facilities.	

In accordance with Finance Administrative Policy No. 1, I have conducted a good faith review of available sources and determine that there is only one known and/or one practical source for the required items in accordance with the Guidelines for Justification attached.

**REQUESTOR CERTIFICATION:**

<i>Julie Ossege</i>	11-10-21
Requestor Julie Ossege	Date

**DEPARTMENT DIRECTOR APPROVAL:**

<i>Craig Johnson</i>	
Director Craig Johnson P.E.	Date

**MATERIALS MANAGER APPROVAL:**

In accordance with Finance Administrative Policy No. 1, I have conducted a good faith review of this request and agree that there is only one known and/or one practical source for the required items in accordance with the Guidelines for Justification attached.

Levi D. Gibson, CPA, M.Acc.	
<i>Levi D. Gibson</i>	Date 11/23/2021
Procurement requires reevaluation and resubmission of a Sole Source Request for this procurement:	

Single Use Only:	<input type="checkbox"/>	Annually:	<input type="checkbox"/>
End of first term of Contract:	<input type="checkbox"/>	End of Contract, including any extensions:	<input checked="" type="checkbox"/>



## Procurement Sole Source and Special Procurement Request

Check the reason(s) below to identify why you have determined the purchase is a **Sole Source or Special Procurement** and attach supporting documentation. Use only column. A purchase cannot be BOTH a sole source and a special procurement

SOLE SOURCE	SPECIAL PROCURMENT
<input type="checkbox"/> Compatibility. Indicate system, make, model and function <input checked="" type="checkbox"/> Unique repair/replacement item. Identify item to be used with previous PO number item purchased, and warranty period <input type="checkbox"/> Supplementary or necessary part required from same manufacturer. Identify in-house equipment and use with existing system <input type="checkbox"/> Unique Item <input checked="" type="checkbox"/> Unique Service <input type="checkbox"/> Proprietary Specifications (Copyright, patented, etc.) <input type="checkbox"/> Other reasons, if not above. Explain in detail	<input type="checkbox"/> Presents such limited competition that a competitive bid or proposal process cannot reasonably be used <input type="checkbox"/> Discourages the use of a competitive bid or proposal as it will result in a substantially higher cost to the city, or will otherwise impair the city's financial interests <input type="checkbox"/> Substantially impede the city's administrative functions or the delivery of services to the public <input type="checkbox"/> Does not qualify as a sole source or emergency <input type="checkbox"/> Has only one provider with the experience and capability to successfully perform the contract <input type="checkbox"/> Presents a significant time constraint as the need was not known in sufficient time to allow for competitive procurement and time is of the essence <input type="checkbox"/> Other reasons, if not above. Explain in detail

**JUSTIFICATION:**

Use the Guidelines for Justification of the selected reason(s) above, and provide a full explanation of your reason that the product/service is a sole source or special procurement: West Area and Arrowhead Water Reclamation Facilities have six (6) Turblex Blowers at each plant. These blowers are used to provide air to support the wastewater treatment process. This equipment is unique and requires service by the manufacturer's trained technician. **Parts for these blowers are not interchangeable with other brands and must be from the manufacturer for warranty purposes.**

**MANDATORY RESEARCH DOCUMENTATION REQUIREMENT:**

Provide a detailed explanation of efforts made to determine the availability of the product or service from any other vendor, including other distributors: See Attached Sole Source letter

**PREPARER NOTE:** If this is a vehicle or technology purchase, concurrence of the Equipment Management Superintendent or the IT Director will be required.

Approval of a vendor as a sole source or a special procurement only determines the procurement method. Council approval and a signed contract may also be required.



October 13, 2021

Howden Roots, LLC  
4654 W. Junction Street  
Springfield, MO 65802, USA

Tel: +1 417 864 5599  
Fax: +1 417 866 0236  
Web: [www.howden.com](http://www.howden.com)

Subject: Factory Authorized Service

Dear Howden / Turblex Equipment Owners,

The Howden Roots site located in Springfield, Missouri is a production and service facility that has been providing customized turbomachinery solutions for over 30 years.

This location manufactures parts, performs repairs, and provides field services for Single Stage Blowers, Steam Turbines, and Compressors. Services are available for new and legacy OEM equipment brands including:

- Steam turbines – Howden, Siemens
- Blowers and compressors – HV-Turbo, Cord-Turbo, Siemens Energy, Inc., Roots, Kuhnle, Kopp & Kausch
- Fans – Schiele

Howden is the only factory-authorized service center and distributor of OEM components in North America for these machines. Our commitment to exemplary operating installations is demonstrated by the Company's investment in the Customer Service/Parts Department. This highly trained group of professionals includes in-house technical and parts departments, as well as mechanical and instrumentation field services personnel. The Howden field service group is supported by a staff of mechanical, electrical and instrumentation engineers from our engineering centers.

For technical support and/or spare parts for your Howden equipment, contact us at +1 417 864-5599.

**Purchase orders should be addressed to:**

Howden Roots, LLC  
4654 West Junction Street  
Springfield, MO 65802  
USA



**Remit to:**

Howden Roots, LLC  
P. O. Box 840455  
Dallas, TX 5284-0455

**Remit via Bank Wire/ACH to:**

Howden Roots, LLC  
Account number: 4451243234  
USA Funds SWIFT Code: BOFAUS3N  
Routing number domestic: 023009593  
Routing number ACH/EFT: 111000012

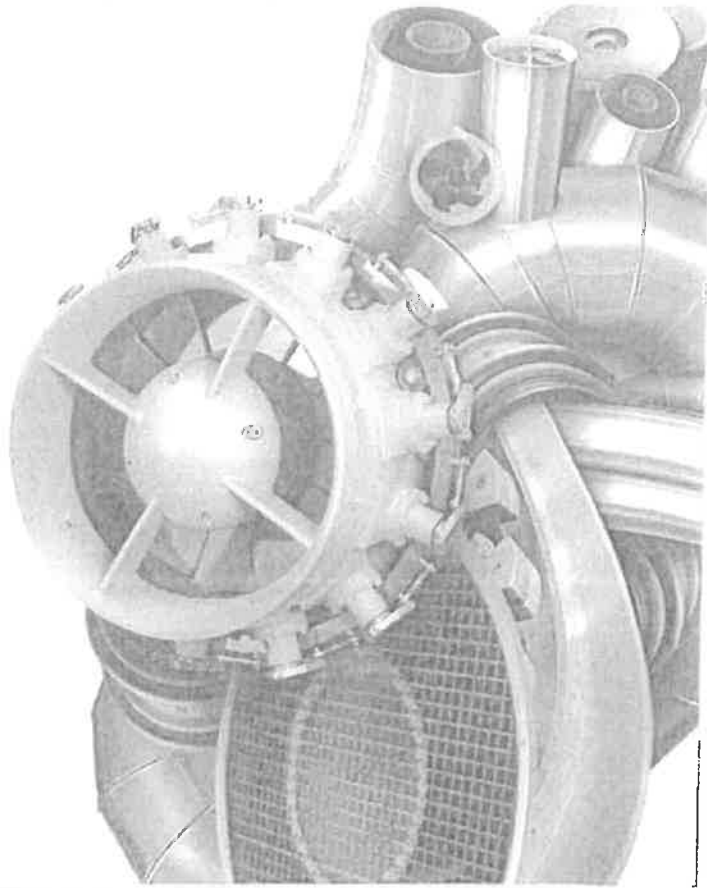
Should you have any problems or additional needs, please do not hesitate to contact us.

With kindest regards,

A handwritten signature in black ink, appearing to read "Matt Martin". The signature is written in a cursive, flowing style.

Matt Martin  
**General Manager**

Direct: (417) 380-5713  
Email: [Matt.Martin@howden.com](mailto:Matt.Martin@howden.com)



# Proposal

## Three Year Service Agreement

Proposal to:	Glendale AZ	Our reference:	HROJAJ.AFM.00789
For:	Bryan Cook		
Project:	Glendale AZ 3-year LTSA	Date:	November 5 <sup>th</sup> , 2021

Howden, 4654 W Junction Street, Springfield, Missouri 65802, USA

Tel: 417-380-5777  
Email: [Matt.Mosier@howden.com](mailto:Matt.Mosier@howden.com)  
Web: [www.howden.com](http://www.howden.com)

**Revolving Around You<sup>®</sup>**



Customer: Glendale AZ  
Project: Glendale 3-year LTSA  
Site: S129 Arrowhead & S145 West

Our ref: HROJAJ.AFM.000789  
Date: November 5<sup>th</sup>, 2021



## 1. Introduction

This proposal is for a three-year service agreement for the Howden (Turblex) compressors installed at Glendale AZ. We look forward to our continued relationship and are pleased to offer this proposal for your consideration.

### Your Howden contacts:

Commercial inquiries:	Technical inquiries:
<b>Matt Mosier</b>	<b>Jessica Jarriel</b>
Tel: +1 417 380-5777	Tel: +1 417 380-5756
Fax: +1 417 866-0235	Fax: +1 417 866-0235
Email: <a href="mailto:Matt.Mosier@howden.com">Matt.Mosier@howden.com</a>	Email: <a href="mailto:Jessica.Jarriel@howden.com">Jessica.Jarriel@howden.com</a>

## 2. Technical specification

### 2.1. Scope of supply/equipment description

- Three year service agreement for the six (6) compressors installed at Glendale Arrowhead (Model KA5-SV-GL210 S/N: 4611-13 project #: 876T) and Glendale West (Model KA22-SV-GL225 S/N: 4889-90 & 6098 project #: 1028 & 1962).
- The factory service program will consist of three (3) visits (performed annually) to the jobsite by a factory representative who will provide annual inspections and Class I services.
- A total of one (1) Class I service will be performed on each of the six (6) compressors in conjunction with one or more of the three plant visits.
- Typical replacement parts for the Class I services are included. Any other replacement parts and labor are not included in this program. Description of Annual Inspections and Class I services are attached.
- All travel, per diem, freight and duties if required are included in this fixed price agreement.
- Howden technician working hours consist of 10-hour days Monday – Friday and an 8-hour day on Saturday until completion.

### 2.2. Notes

- Proposal assumes the site will provide at least one mechanically and one electrically qualified helper to assist the Howden technician. This pricing also assumes that proper certified lifting will be available and the inlet filter/transition piece, and sound enclosures will be removed prior to the Howden technician's arrival (if applicable) for access to perform above listed services. Does not include craft labor and special tools to support the work.
- This proposal includes typical replacement parts for above listed services. Any significant wear or abnormalities identified requiring extra labor and / or parts shall be billed per Howden's standard Service Rate Schedule or Price lists. Howden will provide an estimate of additional time and/or materials required. Typical replacement parts are non-returnable.

Customer: Glendale AZ  
 Project: Glendale 3-year LTSA  
 Site: S129 Arrowhead & S145 West

Our ref: HROJAJ.AFM.000789  
 Date: November 5<sup>th</sup>, 2021



- Howden LTSA members will receive 24 hour technician mobilization if emergency services are required; in case emergency service is required it will be billed at the current published rates in attached rate schedule.
- Howden LTSA members will have access to remote troubleshooting services available upon request; these services if required will be billed at the current published rates in attached rate schedule.

### 2.3. Parts list

Class: KA5 3Y GL210			
3	O-RING	N17L05479	D119
3	SEALING RING	KA5DH025	H503
3	O-RING	89412019	H110
6	O-RING	89412020	H111
3	O-RING	89027296	T231
3	O-RING	00080340017	T246
102	SCREW	N61T04040	D118
3	O-RING	N17M3139	T112

Class: KA22 3Y GL225			
3	SEALING RING	9332260869	H503
3	O-RING	9332253500	D119
3	SEALING RING	N17A35507	D241
3	O-RING	89027262	H110
6	O-RING	89027296	H111
3	O-RING	89412415	T231
3	O-RING	N17V3185	T246
114	SCREW	N61T06065	D118

Cleaning Kits			
2	Cleaning Kit A	300031	
2	Cleaning Kit B	300032	

### 2.4. Pricing

Three (3) Year LTSA (USD)	<b>\$157,000.00</b>
Budget Allocation for non-consumable parts and additional services (USD)	<b>\$31,400.00</b>

Customer: Glendale AZ  
Project: Glendale 3-year LTSA  
Site: S129 Arrowhead & S145 West

Our ref: HROJAJ.AFM.000789  
Date: November 5<sup>th</sup>, 2021



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## 2.5. Terms

This service agreement can be procured by a onetime lump sum payment at the above price and will lock in cost for the contracts entirety. If yearly payments are requested, annual purchase orders will be accepted with prior approval. Howden reserves the right to adjust cost due to market fluctuations with a paid yearly contract.

Budget allocation for parts and service to be invoiced at time of service. Any additional labor or parts that exceeds this budget allocation shall be billed per Howden's standard Service Rate Schedule or Price lists. Howden will provide an estimate of additional time and/or materials required.

This proposal is based on our Howden Roots, LLC Standard Terms of Sale of Goods. All provisions of this offer are subject to negotiation and final approval by Howden.

# Howden Roots LLC Field Service Rates

## HRO-S – US dollars (USD)



*\*All intellectual property rights are reserved to HUSA and/or the respective owner(s) (if different).*

**Services Provided:**  Inspections  Maintenance  Field Repairs  Balancing  Site Supervision  Project Management  Start Up  Installation Supervision

### A. Rates for service in Continental North America U.S. Dollars (USD):

Days	Field Service Technician		Engineering Personnel	
	First 40 Hours	Over 40 Hours	First 40 Hours	Over 40 Hours
Monday thru Saturday (except holidays)	\$175/hour	\$265/hour	\$270/hour	\$400/hour
Sunday, and locally recognized holidays	\$350/hour		\$540/hour	

### B. Rates for service outside Continental North America U.S. Dollars (USD):

Days	Field Service Technician		Engineering Personnel	
	First 40 Hours	Over 40 Hours	First 40 Hours	Over 40 Hours
Monday thru Saturday (except holidays)	\$210/hour	\$320/hour	\$280/hour	\$425/hour
Sunday, and locally recognized holidays.	\$425/hour		\$560/hour	

### C. Service and Travel Standards (USD)

1. The minimum time off for a person during any 24-hour period must be ten (10) consecutive hours.
2. Travel time, whether during first 40 hours or over 40 hours, will be invoiced at the Monday through Saturday Field Service Technician rates in Tables "A" & "B". Travel in Continental North America is invoiced actual travel time with a maximum of ten (10) hours each day. Travel outside Continental North America is invoiced actual travel time. Actual travel time on holidays or to the jobsite on Sundays will be at the Field Service Technician Sunday and Holiday rate in Tables "A" & "B".
3. Standby time at job site, locally on call, training, or meetings will be invoiced as time worked and be based on Tables "A" & "B". Weekend waiting rate will be 8 hours per day invoiced at the Field Service Technician first 40 hour rate in Tables "A" & "B".
4. Rates apply from time and date of departure home base to time and date of return home base.
5. When a project is expected to exceed 5 continuous weeks, then after 3 weeks the Buyer will allow an extended weekend leave or rotation of personnel. Travel fees shall be by Buyer.
6. Air travel on flight segments exceeding 12 hours will be business class and shall be paid by Buyer. Air travel on flight segments exceeding 4 hours will be premium economy and shall be paid by Buyer.
7. Payments shall be in U.S. funds unless otherwise agreed in writing
8. Rates quoted are subject to adjustment without notice to conform to Seller's published rates in effect at the time service is performed.
9. Howden may offer a priority service when the relevant Howden personnel are available, for emergency or breakdown callouts. An additional 30% of the applicable labor rate will be charged where Howden personnel are requested and able to be mobilized within 24 hours of the request being received.

### D. Expenses (USD)

1. Meals will be \$65/day per diem to be charged from the day of travel start to the day of travel end.
2. Lodging, incidental expenses, transportation to and from the city nearest the jobsite, plus local transportation will be invoiced at cost plus 20% administrative fee. Receipt(s) to be provided when any expense exceeds \$60.00.
3. Transportation to and from the city nearest the jobsite, plus local transportation will be charged at cost plus 20% administrative fee. The mileage allowance for personal car use will be current U.S. government rate per mile.
4. Tool usage, when required, will be charged at a rate of \$350 per trip.
5. Expenses for Airline travel shall be charged at cost Plus a 20% administrative fee (Administrative fee shall not exceed \$500).

### E. Terms and Conditions

The sale of services by Howden Roots LLC ("Seller") is subject to Seller's Terms for Sale of Goods and if such terms differ in any way from Buyer's order, or if such terms are construed as an acceptance or confirmation acting as an acceptance, then Seller's acceptance is expressly made conditional on Buyer's assent to any terms or conditions contained in Seller's terms that are different from or additional to those contained in Buyer's writing. Further, this quote shall be deemed notice of objection to such terms and conditions of Buyer. If this quote is construed as the offer, acceptance of same is expressly limited to the terms and conditions contained herein. In any event, Buyer's order of the services shall constitute and manifest Buyer's assent to Seller's Terms for Sale of Goods.

**Howden Roots LLC**  
**Standard Terms and Conditions of Sale**



1. **DEFINITIONS; SCOPE** - "Buyer" means the issuer of the purchase order and its attachments. "Seller" means Howden Roots LLC.; "Order" means Buyer's purchase order/contract, these terms and conditions of sale, Seller's acceptance and other attachments mutually agreed upon by the parties. "Goods" means the specified drawings, goods and parts as described in Seller's quotation/bid, this Order, and its attachments; "Services" means the specified supervision, testing, repair, or other services of Seller as described in Seller's quotation/bid, this Order, and its attachments. Delivery and scope of supply shall be based upon Seller's quotation/bid and any expressly agreed upon changes.

2. **ACCEPTANCE** - Buyer's acceptance of any Goods or Services from Seller shall constitute full acceptance of Seller's quote and these terms and conditions. These terms and conditions take precedence over Buyer's terms and conditions to which notice of objection is hereby given. No terms or conditions in Buyer's order shall be binding upon Seller unless specifically agreed to in writing by Seller. Neither Seller's commencement of performance or delivery shall be deemed as acceptance of Buyer's terms and conditions.

3. **TESTING AND INSPECTION** - If specified in the Order, Seller will conduct testing and/or inspection or review(s) by Buyer of the Goods or Services at Buyer's risks and costs. Buyer will receive written notice at least three (3) business days prior to such testing/inspection/review(s). If Buyer waives attendance or fails to attend, any testing/inspections/reviews will be deemed to have been made in Buyer's presence.

4. **TITLE & RISK OF LOSS** - Unless specified in the Order, Goods are being purchased EXW (Origin/Factory), Incoterms 2010. Title and risk of loss shall transfer to Buyer upon delivery to the agreed upon Incoterms point (or when delivery should have taken place but for fault of Buyer). Buyer agrees to document (with photos) and promptly advise Seller of any damage or freight claims. Goods that are not promptly and properly rejected by Buyer upon delivery shall be deemed irrevocably accepted; accepted Goods shall be subject to Seller's warranty herein.

5. **WARRANTY** - Seller warrants that: (i) the Goods will be of good material and workmanship; (ii) the Services shall be performed by competent and qualified personnel in a professional and workmanlike manner in accordance with generally established industry standards; and (iii) the Goods and Services will conform to the technical specifications and/or drawings expressly agreed upon between the parties in writing. Seller's warranties on the Goods will be in effect until the earlier of: (i) twelve (12) months from first operation/use of any such Goods or (ii) eighteen (18) months after date of delivery (at the applicable FOB/Incoterms point quoted by Seller). Seller's sole liability and Buyer's sole and exclusive remedy for breach thereof shall be the repair or replacement of such Goods by Seller, at Seller's option and cost (but not including transportation, removal, reinstallation, and decontamination). Seller's warranties on the Services will be in effect until ninety (90) days from the date of the performance of such Services. Seller's sole liability and Buyer's sole and exclusive remedy for breach thereof shall be the re-performance of such Services by Seller. Any warranty repair/replacement/re-performance pursuant to the above warranties shall be warranted by Seller for a period equal to the remainder of the original warranty period set forth above. No "evergreen" or "in-place" warranty is being provided. Seller shall have the sole right to specify the manner and timeframe for such repair/replacement/ re-performance. Defective/non-conforming parts(s)/Goods must be returned to Seller free of all contaminants and, in the event of replacement, will become the property of Seller unless Seller instructs otherwise. The warranty does not include the costs of fitting new parts or other Equipment. If Seller opts to perform any warranty obligations in-place, Buyer shall, without cost to Seller, during a specified time period agreed upon by the parties, provide access by disassembling, removing, replacing, and reinstalling any equipment, structures, or other obstructions to the extent necessary to permit Seller to perform its warranty obligations.

**THERE ARE NO WARRANTIES, CONDITIONS, GUARANTEES, REPRESENTATIONS, OR REMEDIES THAT EXTEND BEYOND THE FACE OF THESE TERMS AND CONDITIONS. ALL OTHER WARRANTIES, CONDITIONS, GUARANTEES, REPRESENTATIONS, OR REMEDIES EXPRESS OR IMPLIED, STATUTORY OR OTHERWISE (INCLUDING ANY CONDITION OR WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE) NOT EXPRESSLY SET FORTH HEREIN, ARE FULLY DISCLAIMED AND EXCLUDED TO THE FULLEST EXTENT PERMITTED BY LAW. SELLER'S WARRANTIES DO NOT COVER ANY GOODS OR SERVICES THAT HAVE BEEN ALTERED OR SUBJECTED TO ACCIDENT OR IMPROPER STORAGE, INSTALLATION, ASSEMBLY, COMMISSIONING, MAINTENANCE, USE OR APPLICATION. SELLER DOES NOT WARRANT THAT THE GOODS WILL RESIST THE ACTION OF EROSION OR CORROSIVE GASES, LIQUIDS, OR SOLIDS, OR PRODUCE RESULTS IN COMPLIANCE WITH ANY LAWS, DECREES, OR OTHER STANDARDS.**

6. **INSTALLATIONS AND ASSEMBLY** - Unless specified in the Order, Seller is only the supplier of the Goods and shall have no responsibility for the assembly and installation of the Goods

7. **INTELLECTUAL PROPERTY** - Seller's intellectual property rights and proprietary information (in hard copy or in electronic format) remain the property of Seller. Notwithstanding any other provisions or requirements of this Order, no intellectual property or proprietary information is being sold, granted, transferred, licensed, or assigned; there are no works-made-for-hire or unrestricted use (any government rights shall be "limited rights"). Seller shall not be required to provide, or provide access to, any confidential or proprietary area or information. Buyer shall not reverse engineer or otherwise attempt to re-create the Goods/Services.

8. **PATENT INDEMNITY** - Except (i) to the extent of designs or other intellectual property provided by Buyer and/or (ii) to the extent that Goods are altered or combined by Buyer in a manner causing the infringement, Seller will indemnify Buyer from claims by third parties against Buyer if the Goods infringe any Canadian or United States patent. If an injunction is issued against the further use of the Goods, Seller will, at its option and expense: (i) procure for Buyer the right to continue using said item of Goods; or (ii) modify or replace the same with non-infringing Goods or (iii) remove the infringing Goods and refund the purchase price.

9. **BUYER MATERIALS** - Buyer-furnished material must be received by Seller in accordance with the delivery schedule agreed upon by both parties. If shipment of such material is delayed or lost, Seller reserves the right to: (i) invoice and hold shipment awaiting such material or (ii) invoice and ship less such material. Buyer shall reimburse Seller for all liability incurred by Seller as a result of any such Buyer delay.

10. **ON-SITE SERVICES** - The following section shall apply only if Seller provides on-site Services to Buyer under this Order:

10.1 **Indemnity of Buyer**. Seller will indemnify Buyer from non-nuclear claims brought by third parties against Buyer for (i) bodily injury (including death) and (ii) property damage, each only to the extent directly caused by the negligence of Seller. Seller shall not be responsible for the acts/omissions of Buyer or others. Seller's indemnity obligations shall not apply to Buyer property or any nuclear activity/incident.

10.2 **Insurance**. Seller shall maintain the following insurance coverage: (1) Commercial General Liability with limits of \$1,000,000 combined single limit occurrence for Bodily Injury, Physical Property Damage of third party property, and Contractual Liability coverage, subject to an annual aggregate of \$2,000,000; (2) Automobile Liability - Bodily Injury/Physical Property Damage in the amount of \$1,000,000 combined single limit each occurrence; and (3) Workers Compensation Insurance - statutory, as to Seller's employees. If requested, Seller will provide an ACORD form of certificate confirming such coverage. Seller's provision of a certificate of insurance in accordance with Buyer's site requirements does not constitute Seller's acceptance of Buyer's terms of purchase. Seller shall have no other or further obligations related to insurance or coverage.

10.3 **Other On-site/Service Provisions**. Seller shall comply with applicable Canadian, U.S. and/or provincial/territorial/state statutes, acts, ordinances, regulations, codes, and laws that apply to Seller's performance of the Work. Seller shall comply with job/site requirements as mutually agreed upon by the parties. Seller is an independent contractor and is not responsible for oversight or supervision of work, property or employees of others, including health, safety, or security. Buyer shall advise Seller's personnel in advance of all known and/or suspected hazardous/unsafe conditions and risks that may be encountered while on-site, including proper Material Safety Data Sheets (MSDS). Seller's personnel shall not be required to take any action, or to enter or

remain in any area where he/she reasonably determines that it would be unsafe. Seller's employees, subcontractors, and representatives shall be given unobstructed access to the site and the work. Seller's time and expense for any delays not caused by Seller shall be charged to Buyer. Buyer shall be responsible for any damage to or loss of property of Seller or its subcontractors property if such damage/loss is not caused by Seller or its subcontractors.

**11. FORCE MAJEURE; SHIPMENT AND DELAYS** - Seller shall not be liable for damages or delay in performance arising from causes beyond its control or without its fault or negligence, including, but not limited to, acts of God or the public enemy, acts of a government in its sovereign capacity, fires, floods, disease outbreak or epidemic and/or any resulting quarantine restrictions, strikes, freight embargoes, and/or severe weather. If Buyer requests that Seller store Goods or if delivery instructions are not promptly received from Buyer upon Seller's ready-to-ship notification, Seller may provide for storage of the Goods at Buyer's risk and expense or Buyer must provide for storage at Buyer's cost and risk. Shipments held beyond the scheduled date at the request or fault of Buyer may be billed immediately to Buyer including reasonable expenses incident to such delay, and Buyer shall assume title and risk of loss thereof. Liquidated/delay damages shall not apply to this order.

**12. TAXES & DUTIES** - Buyer shall be responsible for all sales, use, value added and similar taxes ("Sales Taxes") required on the Goods and Services, which shall be in addition to the consideration payable for such Goods and Services. If Seller invoices Buyer for such Sales Taxes, then Buyer shall pay such amounts to Seller concurrent with the payment of the consideration upon which such Sales Taxes are calculated. If Seller does not invoice Seller for such Sales Taxes, Buyer shall report and remit such Sales Taxes directly to the appropriate taxing authority within the time period required by law and shall provide evidence of such remittance to Seller upon request. Buyer shall be responsible for all import, export, customs duties, fees and similar charges ("Duties") in respect of the Goods and Services, and if Seller is required to pay any amount of Duties in respect of the Goods and Services, then Buyer shall reimburse Seller for such amount upon request.

**13. PAYMENT OF PURCHASE PRICE** - Buyer shall pay all invoices within thirty (30) days from the date of Seller's invoice ("Payment Due Date") by electronic funds transfer (EFT) or automated clearing house (ACH) transaction. If Buyer disputes all or part of an invoice, Buyer must (i) submit the dispute to Seller in writing within five (5) business days of the date of invoice or the entire amount of the invoice shall be due on the Payment Due Date; and (ii) pay all undisputed amounts on the Payment Due Date. If Buyer fails to pay an undisputed invoice on or before the Payment Due Date, Seller reserves the right to (i) charge late fees at the lesser of (i) the rate of 1.5% per month (18% per annum) or (ii) the maximum amount permitted by law; (ii) require Buyer to pay all of Seller's collection costs; and (iii) cease all work in relation to this Order (without obligation for liquidated damages, if applicable, incurred due to such cessation).

For milestone payments required under this Order, Seller may invoice on the original milestone completion date if the milestone is not met due to Buyer's fault, untimely response or unreasonable delay. In the event that Buyer seeks to modify the Purchase Order, Buyer agrees to make payments in accordance with the original contract terms until such time as modification is mutually agreed upon. Seller only waives claims for payment to the extent that such payments have been received by Seller. If, in Seller's reasonable opinion, Buyer's financial condition may jeopardize full or timely payment, Seller may (i) require full or partial payment as a condition to commencing or continuing its performance (including in advance of any shipment) or (ii) recover Goods from the carrier, if shipment has been made.

**14. CANCELLATION** - Buyer may cancel this Order, in whole or in part, upon at least seven (7) calendar days advanced written notice to Seller in such case the Seller shall be entitled to be reimbursed for the reasonable Direct Cost incurred by the Seller in performing the work. Direct Costs mean: "such direct costs borne and incurred by the Seller associated with the Order up to and including the date of suspension and/or cancellation, including but not limited to manufacturing costs, salaries, third party supplier costs and reasonable overhead and profit margin." Buyer's cancellation costs shall not exceed the total Order price. Any Goods or Services sold by Seller that are incomplete shall be deemed to be sold "AS IS," "and "WITHOUT WARRANTY OR GUARANTEE OF ANY KIND." Seller may cancel this Order, in whole or in part, at any time if: 1) Buyer suspends work or delays delivery beyond 45 days without it being mutually agreed upon in advance; (2) Buyer breaches any material term of this Order; and/or (3) Buyer files bankruptcy or otherwise fails to either make full and timely payments, meet its obligations, or provide further assurances.

**15. EXPORT CONTROL**- Goods supplied may be subject to export control, trade sanctions, or other export laws, regulations, rules and licenses of Canada, the United States or other countries ("Export Control Regulations"). Buyer agrees to comply with Export Control Regulations as well as any other applicable country's import control laws. Buyer further agrees that if Export Control Regulations are applicable, it will not disclose or re-export any technical data received under this order to any countries for which the United States government requires an export license or other supporting documentation at the time of export or transfer, unless Buyer has obtained prior written authorization from the United States Office of Export Control or other authority responsible for such matters. Unless otherwise mutually agreed upon by the parties, Buyer shall be responsible for obtaining export licenses or other approvals. The Order will not be accepted unless Seller is satisfied that the Goods can be supplied in compliance with the Export Control Regulations. In the event that any applicable Export Control Regulations prohibit or make impracticable Seller's performance hereunder, Seller will be released from all performance related to the Order. Seller will not be liable to Buyer for any losses, damages, or claims arising from such cancellation of the Order. Seller will not accept payment through a trade sanctioned country financial institution.

**16. NUCLEAR SALES (IF APPLICABLE)** - If Buyer or any ultimate end user intends to use the Goods or Services in any atomic/nuclear installation or activity, Buyer must notify Seller accordingly in advance and Seller's "Nuclear Indemnity" shall also apply and control (and such terms are hereby incorporated by reference for such purposes, as if fully set forth herein).

**17. LIMITATION OF LIABILITY; INDEMNITY CONDITIONS; EXCLUSIVE REMEDIES; OBLIGATIONS; & VALIDITY** - The following shall apply, govern, control, and survive at all times and to the fullest extent permitted by law:

**17.1** Seller shall not be liable for any loss of profit or revenue, loss of business, loss of contracts, or for any special, indirect, economic, incidental, consequential, or punitive damages or losses, whether based on contract, warranty, indemnity, statute, tort (including negligence), or otherwise pursuant and/or related to this Order.



**17.2** Seller's total liability pursuant and/or related to this Order whether for breach of contract or by reason of any tort (including negligence), statute, warranty, indemnity, or otherwise, shall in no event exceed the total price of the Order.

**17.3** Any duty to indemnify under these terms and conditions/the Order is conditioned upon Buyer: (i) providing prompt and detailed notice to Seller of any such claim; (ii) tendering the defense/settlement to Seller; and (iii) providing full cooperation, authority, and assistance to Seller.

**17.4** Buyer's rights and remedies shall be deemed sole and exclusive, and in place of those at law and equity. The exclusions and limitations set forth in these terms and conditions shall control at all times and survive any breach, or termination of the Purchase Order. If any provision of these terms and conditions of this Order or part thereof shall be held by judicial determination to be invalid or unenforceable they shall be severed from this Order and the valid or enforceable parts of these terms and conditions shall continue in full force and effect.

**18. ENTIRE CONTRACT; GOVERNING LAW & FORUM; OFFICIAL LANGUAGE; NO THIRD PARTY BENEFICIARIES; ASSIGNMENT** - These terms and conditions of sale cannot be amended, superseded, or modified except by a written document signed by Seller's duly authorized officer and Buyer's duly authorized representative. Governing law and forum of the terms of this Order shall be the laws (and exclusive forum) of the State of New York (USA), despite any conflicts of laws. The official language of this Agreement is English. It is the express wish of the parties that this Agreement and any related documents be drafted and executed in English. The parties agree to exclusive venue in Erie County, New York. Buyer and Seller agree that this Order is between them alone, and there are no third party rights or beneficiaries. Seller may subcontract with third parties for the manufacture and/or purchase of all or part of the Goods and/or Services. Other than Seller's ability to use its vendors/subcontractors, neither party may transfer or assign this Order, in whole or in part, without the other party's express advance permission (which shall not be unreasonably delayed or withheld), and any assignment/transfer without proper consent shall be null, void, and of no force or effect. The parties expressly exclude the application of the United States Convention on Contracts for the International Sale of Goods.

## 4 Recommended Inspection and Service Intervals

	<b>CAUTION</b>
<b>Do Not Perform Maintenance While Compressor is in Operation</b>	
Operating the compressor while performing maintenance poses a risk of injury to personnel.	
	<b>NOTICE</b>
<b>Do Not Perform Maintenance While Compressor is in Operation</b>	
Operating the compressor while performing maintenance poses a risk of damage to the machine.	

### 4.1 Summary of Inspection and Service Intervals

Action	Section	Interval
Compressor Oil Change -GL gearbox	4.2.A 4.2.C	Oil sample after 500 hours of operation. Subsequent oil samples every 6,000 hours, however at least once per year. Oil change interval determined by oil analysis results. See Section C5 for more information.
Motor Lubrication	4.2.A	Refer to Section D1.4 (datasheet) and Section D7.2-7
Oil Filter Element Change	4.2.B	Dirty filter indication and when oil is changed
Monthly Inspections	4.3	Once per month*
Annual Inspections	4.4	Once per year*
Inlet Filter Element Change	4.5.A	At maximum pressure differential according to technical specification
Inlet Silencer	4.5.B	Clean during service
Drive Motor	4.6	According to manufacturer's instructions (ref. Section D7.2-7)
Oil Reservoir Breather	4.7	Check monthly. Replace if evidence of oil leakage, at least once per year.
Cooling Water Shutoff Valve	4.8	While unit is off-line, cycle valve once per month
Actuated Butterfly Valves (blow-off and discharge isolation valves)	4.9	While unit is off-line, cycle valve(s) once per month
Class I Service	4.10	18,000 hours or 3 years, whichever comes first*
Class II Service	4.11	On condition

\* Local conditions may require more frequent maintenance.

### 4.2 Lubrication (by Plant Personnel)

- A. Refer to Section D1.4 for lubrication intervals, types and quantities for all lubricated components. A list of recommended compressor oils is provided in Section D1.8. Refer to the motor operating manual in Section D7.2-7, for detailed instructions on motor bearing lubrication. The compressor oil change interval is determined by the oil analysis results. Refer to Section C5 for oil analysis guidelines. Under normal operating conditions, the compressor can usually operate approximately 12,000 hours between oil changes.
- B. Change the oil filter element when the dirty filter indication is observed (pop-up indicator or LCP alarm if equipped with a switch), and when the oil is changed.
- C. Refer to Section B8 for complete oil drain and fill instructions.

### 4.3 Monthly Inspections (by Plant Personnel)

- A. An important part of a good maintenance program is the periodic recording of operating data so trends or distinct changes in performance can be identified. Howden recommends recording operating data at least once per month, at normal steady-state operating conditions. The following data should be recorded\*:
  - 1. Date and time
  - 2. Unit serial number
  - 3. Inlet air temperature
  - 4. Hour meter
  - 5. Variable diffuser (VD) position from LCP HMI
  - 6. Inlet guide vane (IGV) position from LCP HMI, if equipped
  - 7. Compressor differential pressure, if equipped
  - 8. Discharge air temperature, if equipped
  - 9. Discharge air pressure, if equipped
  - 10. Oil supply pressure
  - 11. Oil supply temperature
  - 12. Oil reservoir temperature
  - 13. Inlet filter differential pressures, if equipped
  - 14. Compressor bearing temperatures, if equipped
  - 15. Compressor gearbox vibration, if equipped
  - 16. Motor amperage
  - 17. Motor speed, if VFD
  - 18. Motor winding temperatures, if equipped
  - 19. Motor bearing temperatures, if equipped
  - 20. Motor bearing vibration, if equipped
  - 21. Sound enclosure temperature, if equipped



***A form that may be used for recording this data is provided at the end of this section. Keep a record of all completed maintenance log sheets and provide for Howden's review during service visits.***

- B. Inspect for cleanliness and general condition of compressor assembly and accessories. Clean the compressor assembly as required.
- C. Inspect and replace inlet air filter element(s) as required.
- D. Check oil filter element condition and replace if required.
- E. Check for oil leaks on the equipment and piping.
- F. Check oil level in compressor and sample/change oil per lubrication schedule in Section D1.4.
- G. Check oil/grease level in motor bearings and change/add per lubrication schedule in Section D1.4.
- H. Verify motor is clean and ventilation openings are clear of dust, dirt, or other debris.
- I. Verify all 4-20 mA current loops are operating properly.

- J. Verify surge detection unit operates properly (ref. Section D7.2-20).
- K. Cycle all motorized valves to check operation and limit switch indications.
- L. Clean oil cooler, as required.
- M. Check oil reservoir breather element for oil leakage and replace if leakage is observed.

#### 4.4 Annual Inspections (by Plant Personnel)

- A. Repeat monthly inspections, plus - - -
- B. Inspect inlet filter/silencer for cleanliness and general condition
- C. Verify discharge check valve operates properly to prevent back flows
- E. Inspect control arm(s) of variable control vanes for slippage
- F. Inspect and tighten all mechanical and electrical connections
- G. Check coupling disc-pack outer edges for fatigue cracks – refer to coupling instruction manual in Section E, document M5. Also check coupling alignment and tightening torques of all bolts (use alignment datasheet form in Section C).



*The coupling bolt torque values are found in Section D7.2-5.*

#### 4.5 Inlet Air Filter/Silencer (by Plant Personnel)

- A. Replace filter elements when differential pressure exceeds the maximum specified value.
- B. The inlet silencer is designed for atmospheric air and is lined with sound absorbing material. Cleaning of the sound absorbing baffles can be done with a vacuum cleaner during service. The sound absorbing material must never be exposed to steam or washed with water. Never use organic solvents for cleaning the sound absorbing material.

**IMPORTANT:** Organic solvents will damage the material and its adhesion to the supporting frame.

#### 4.6 Drive Motor (by Plant Personnel)

- A. Refer to the manufacturer's operating manual in Section D7.2-7 for motor inspection/service intervals and servicing instructions.

#### 4.7 Oil Reservoir Breather (by Plant Personnel)

- A. Check oil reservoir breather monthly for evidence of oil leakage. Oil leakage means that the element is saturated with oil and needs to be replaced. Replace as required, but at least once per year.

#### 4.8 Cooling Water Shutoff Valve (by Plant Personnel)

- A. While the compressor is off-line, cycle the cooling water shutoff valve once per month to insure proper opening and closing and limit switch indication.

#### 4.9 Actuated Butterfly Valves (Blow-Off and Discharge Valves) (by Plant Personnel)

- A. While the compressor is off-line, cycle butterfly valve(s) once per month to insure proper opening and closing and limit switch indication.

### 4.10 Class I Service (by Howden Service Technician)

- A. **Every 18,000 hours/3 years of operation, whichever comes first.** This is the typical interval between Class I service calls. If the machine is exposed to the elements or is operated in a dirty environment, the interval may need to be reduced. If the variable diffuser (VD) or inlet guide vanes (IGV) cease to operate smoothly before 18,000 hours has elapsed, the first service should be moved forward and the interval for subsequent services adjusted accordingly.
- B. Estimated service time: 2-4 days, per unit, assuming one (1) local helper and crane facilities. A Class I Service includes cleaning and checking of all parts exposed to the medium flowing through the compressor, replacement of all flexible seals, operational test and if necessary, adjustment of the control settings for the control panel. Specifically, the following service tasks are required:
1. Repeat monthly and annual inspections, plus - - -
  2. Record compressor operating data prior to servicing the unit
  3. If compressor is equipped with Howden local inlet air filter/silencer, remove shroud from rear of filter assembly or remove complete filter assembly to allow access to inlet of compressor. If inlet is piped, remove spool piece to provide maintenance access.
  4. Disassemble compressor air-end, including variable vane system, inlet housing, spiral casing, contour ring, impeller/rotor and diffuser plate
  5. Inspect and clean impeller
  6. Inspect, clean and lubricate all parts in the variable vane system
  7. Check variable vane geometry
  8. Replace flexible seals (O-rings)
  9. Reassemble compressor and record critical clearances
  10. Clean inlet silencer
  11. Reassemble inlet air filter assembly or inlet piping.
  12. Check coupling alignment before re-start
  13. Perform an operational test of the unit for 4 hours minimum. Record operating data when unit is at a steady-state condition (ref. 4.12). Correct any discrepancies.
  14. Test operation of inlet guide vane or speed control algorithm, if equipped

### 4.11 Class II Service (by Howden Service Technician)

- A. **On Condition.** The need for Class II service shall be determined based on the condition and appearance of the machine observed during a Class I service.
- B. Estimated service time: 4-6 days, per unit, assuming one (1) local helper and crane facilities. A Class II Service includes the following:
1. Repeat Class I Service, plus - - -
  2. Disassemble gearbox
  3. Inspect gearwheels, bearings & seals and check clearances
  4. Replace flexible seals (O-rings)
  5. Reassemble gearbox and record critical clearances
  6. Replace oil filter element
  7. Drain and replace oil in the compressor oil reservoir
  8. Check coupling alignment before re-start
  9. Perform an operational test of the unit for 4 hours minimum. Record operating data when unit is at a steady-state condition (ref. 4.12). Correct any discrepancies.
  10. Test operation of inlet guide vane or speed control algorithm, if equipped

### 4.12 Field Data Log Sheet (following page)



## Pre-Service Checklist

This form shall be completed and returned to Howden for all sites where our employees may be performing activities.

Site Name: \_\_\_\_\_

Please provide the following information on the blowers to be serviced during this trip		
Is the complete O&M available?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Are all the special tools available? Refer to O&M for list & drawings.	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Is an inlet filter system or sound enclosure on blower? If so, must be removed by site.	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Have spare parts been ordered for this service?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Are all standard spare parts on site?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
If all standard parts not available; list spare parts available:		
For Class II only, is an Acetylene torch with rosebud on site?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
For GK & GA only, is a hydraulic pump with 0-10,000 psi gauge on site?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
For GK & GC only, is a bearing heater on site?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Is the compressor(s) being serviced operational?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
If compressor not operational, list S/N:		
If compressor not operational, list last date in operation:		
Blower or site issues?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Explain:		
Does the compressor(s) being serviced Start / Stop?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Are there high temperature <input type="checkbox"/> alarms / <input type="checkbox"/> trips?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Explain:		
Are there surging issues?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Explain:		
Does the master control panel work?	<input type="checkbox"/> YES	<input type="checkbox"/> NO
Other issues? Explain:		
Will one local helper be available to assist Howden personnel?	<input type="checkbox"/> YES	<input type="checkbox"/> NO

Our Technical Field Advisor contact: Name \_\_\_\_\_ Phone \_\_\_\_\_

If this form is not returned completed we will assume that all items are on site and ready for our Technical Field Advisor (TFA) to travel to your site to perform the service as contracted. The information provided shall be reviewed and approved by Howden prior to any work being done by a Howden employee. Note: Additional information may be required as part of the review process.

### Person Completing Form:

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contact Information: \_\_\_\_\_

# Mandatory Lifting Device Reporting



This form shall be completed and returned to Howden for all sites here our employees may be performing activities.

### Site Information:

Site Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

### Lifting Information:

Site has proper, adequate and weight tested lifting in buildings or facilities where Howden employees may be performing work. Devices are in accordance with local, state and federal regulations.

Yes  No

If yes, then detailed information shall be attached in regard to:

1. The location and weight rating of the equipment. Lifting should be A) rated per the below chart, B) should be located centerline of the compressor, C) allow for removal of components straight out of the compressor and D) allow movement after removed from the compressor.

Unit size	Heaviest individual component	Unit on Site	Weight Rating of Site Lifting Equipment
KA2	881 Pounds (US): ENTIRE COMPRESSOR	<input type="checkbox"/>	
KA5	1763 Pounds (US): ENTIRE COMPRESSOR	<input type="checkbox"/>	
KA10	925 Pounds (US): GEARCASE	<input type="checkbox"/>	
KA22	1260 Pounds (US): GEARCASE B	<input type="checkbox"/>	
KA44	1970 Pounds (US): GEARCASE B	<input type="checkbox"/>	
KA66	2960 Pounds (US): INLET HOUSING & VOLUTE	<input type="checkbox"/>	
KA80	4856 Pounds (US): GEAR COMPLETE	<input type="checkbox"/>	
KA100	8030 Pounds (US): INLET HOUSING & INNER SPIRAL	<input type="checkbox"/>	

2. Any equipment, precautions, etc. needed for Howden employees that may be performing functions in the work areas.
3. Any obstructions above the compressor centerline that prevent the use of proper lifting and service should be reported prior to issuance of a P.O.

The information provided shall be reviewed and approved by Howden prior to any work being done by a Howden employee. Note: Additional information may be required as part of the review process.

### Person Completing Form:

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Contact Information: \_\_\_\_\_