

April 25, 2024

Ryan Smith
Wastewater Division Manager
City of Watsonville, Public Works & Utilities

Watsonville WWTF – Boiler Replacement
Quotation: QUO-152021-L0M5Y4
Revision: 0

Hello Ryan,

In response to your request we are pleased to offer our proposal for the equipment described in the attachments.

Thank you for the opportunity to quote on your requirements. We trust that we will be able to review this proposal with you at your convenience. In the meantime if you have any questions or require additional information please let me know.

Sincerely,

Carleton W Swartz Jr

Carleton W Swartz
Operations Manager / AM Sales Manager / Key Account Manager
R.F. MacDonald Co.
Phone 510-774-6237

CLEAVER BROOKS HOT WATER BOILER

One (1) Cleaver-Brooks CBLE-4D-700-100-125HW firetube boiler shall be offered as a self-contained packaged forced draft horizontal firetube hot water boiler rated for 100 boiler horsepower with fuel input capacities of 4,200 CFH based on gas of 1000 BTU/CFH. Burner packages will be fully automatic for firing natural gas. Boiler will be designed for maximum hot water pressure of 125 PSIG and have a maximum input of 4,200,000 Btu/hr with a nominal output of 3,350,000 Btu/hr.



The boiler shall be a four-pass horizontal firetube updraft boiler with 5.0 square feet of heating surface per rated boiler horsepower. It shall be mounted on a heavy steel frame with an integrated forced draft burner and burner controls. The boilers shall be completely preassembled and fire tested at the factory. The unit shall be ready for immediate mounting on floor or simple foundation and ready for attachment of water, steam, fuel, electrical, vent and blow-down connections.

Boiler Design

The boiler shell will be constructed in accordance with ASME Section IV Code and will receive authorized boiler inspection prior to shipment. A copy of the inspection report shall be furnished to the purchaser. Two lifting eyes shall be located on top of the boiler. Front and rear doors on the boiler shall be hinged or davited. Doors are to be sealed with fiberglass tadpole gaskets and fastened tightly using heavy capscrews that thread into replaceable brass nuts. The Rear refractory and insulation shall be contained in the formed door, which must swing open for inspection of brick work. The boiler tubes shall not include turbulators, swirlers or other add-on appurtenances. Front and rear tube sheets and all flues are fully accessible for inspection and cleaning when the doors are swung open. The boiler shall be furnished with adequate handholes to facilitate boiler inspection and cleaning along with a manhole. The exhaust gas vent shall be located near the front of the boiler on the top center line and shall be capable of supporting 2,000 lbs. The boiler pressure vessel shall be completely insulated with a minimum of 2" of insulation and shall be encased in an 18 gauge metal cabinet with primer and finish coat of paint. The entire boiler based frame and other components shall be factory painted before shipment using a hard finish enamel coating.

Boiler Trim (Mounted)

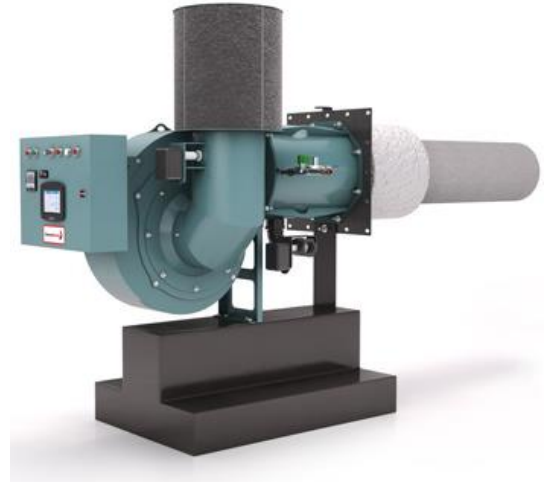
- Observation ports shall be provided at each end of the boiler
- Temperature gauge
- Auxiliary low water cut-off w/manual reset
- High limit, operating limit, and modulating temperature controls

Boiler Trim (Shipped Loos)

- ASME rated pressure relief valve(s)

CB ProFire – MTH Series Burner

The Profire Model MTHG-42 burner includes full modulation with parallel positioning and shall fire **natural gas and digester gas** at a maximum 4,200 MBTU per hour. Capable of ultra-low NOx/CO emissions without FGR, the MTH series features a rugged alloy fiber material combustion element over a stainless-steel frame, providing flexibility, longevity and trouble-free operation for the life of the burner. The design is ideal for use with applications where low emissions are required and FGR is impractical or inaccessible. The MTH burner with surface stabilized combustion guarantees reliable, quiet operation and is capable of meeting today's most stringent NOx emission levels.

**Swing-Away Air Housing**

Provides easy access to the nozzle, scanner and the pilot for inspection or removal. No disconnection of fuel or power lines required.

Removable Mantle

The mantle is easily removable without disassembling the burner from the boiler. It can be serviced, inspected and replaced without disconnection of fuel or power lines.

Parallel Positioning

System includes a completely integrated burner control with fully modulating flame safeguard from a single source. High accuracy and resolution with repeatable actuator positions for efficient operation. Digital positioning feedback from actuators ensure precise control, repeatability, reliability and independent ignition position for greater flexibility.

Low Blower Motor HP

Advanced engineering provides increased combustion air fan efficiency requiring lower blower motor horsepower, thus increasing electrical savings.

Controls The CB-Hawk 1000 system integrates a programmable logic controller, touch screen graphical human-machine interface (HMI), and burner management control, used to control and monitor the complete boiler system. The system offers advanced technology and advanced features for Burner Management and monitoring, firing rate control, thermal shock protection, remote monitoring, and building automation system monitoring interface. The integrated control system will consist of a programmable controller L24ER, HMI, and burner management control, to provide automatic burner sequencing, firing rate control, system fault indication, self-checking diagnostics, and fault messages. Fault messages are displayed in plain text instead of codes. The CB-Hawk 1000's operating parameters are password protected and cannot be altered. The Hawk 1000's system is designed to operate with a gas, oil, or a combination burner using FARC control with PLC programming, commissioning and set up. Using a touch screen graphical HMI, the CB-Hawk 1000 allows the user to adjust various parameters such as operating set points, firing rate, alarm set points, and other control settings. The HMI provides several user interactive screens to display and indicate the status of the boilers operation, operating parameters and integrated control such as the burner management controller.



Emissions Design

The burner will include an emission control package designed and supplied by Cleaver-Brooks to meet a NO_x emission limit of 9 ppm while firing natural gas and 15 ppm while firing digester gas.

Requirements

Electrical: 460V/3Ph/60Hz

A control circuit transformer will be provided to supply 120V/1Ph/60Hz to the control circuit.

Note: Digester gas requires higher heating value of 550 btu/ft³ (+/- 10%), under 5% H₂O, under 1000 ppm H₂S, and under 25 ppm Siloxanes for burner to function properly. 3 PSI incoming gas pressure required.

Start-Up Service

The quoted price includes the services of our service engineer to supervise starting, adjusting and testing the boiler and to instruct operating personnel in the proper operation and maintenance of the equipment. This service is to be performed when the equipment is completely installed and ready to operate with the operator available to fire the equipment and receive the instructions. Boiler insurance is to be provided by you before the start-up is ordered. Start-up services must be scheduled 2-weeks prior to the requested date for start-up.

INSTALL SCOPE

- ❖ We propose to supply and install (1) CBLE Hot Water Boiler 100HP
- ❖ The boiler will be located on the “Open” housekeeping pad.
- ❖ RFM will supply the rigging and equipment needed to move the boiler into the pad
- ❖ RFM will anchor the boiler and build and needed supports
- ❖ We will extend the pad up to 6 feet to accommodate the new boiler length
- ❖ Complete all necessary piping connections and valves required to tie in the new boiler
- ❖ Hot water Supply and Return
- ❖ Natural Gas (Minimum 5 PSI Required)
- ❖ Digester Gas (Minimum 3 Psi Required)
- ❖ Drains
- ❖ Safety Relief Valves
- ❖ Boiler Flue will be installed through the existing penetration with rain cap and storm collar
- ❖ Electrical from Customer Disconnect to Boiler (BMS Integration if required by others)
- ❖ The customer will provide the necessary electrical power requirements for the disconnect in the boiler room. RFM will complete control wiring termination in the boiler panels as needed
- ❖ RFM will provide, pipe, and install Gas and Digester regulators as long as gas is available to meet the boiler requirements at the gas train
- ❖ Piping insulation from boiler piping to the system point of connection is included and will match the existing insulation.
- ❖ Factory-trained technicians start the system and adjust for proper operation
- ❖ Provide any necessary customer training after installation and startup

NOTES

The customer to provide a lockable fused disconnect with the correct Boiler FLA rating within 30 feet of the boiler.

Minimum gas pressures and flow must be met for the burner to operate at 9ppm and 15ppm Nox

All work is to be performed during normal working Hours 7 am-4 pm (Mon-Fri)

Concrete Pad extension is estimated at a value of \$15,000.00, if a more specific requirement is given by the county or other engineer that exceeds 15K an additional quote will be sent as a change order.

No Permits, install drawings, or permits of any kind are included in this proposal.

Factory equipment submittal drawings and wiring diagrams will be provided.

Any additional roof work needed to make the opening weatherproof to be provided by others

PRICING

One (1) Cleaver-Brooks CBLE-700-100-125HW boiler as described above\$282,104.00
Labor to Install One (1) Cleaver-Brooks Boiler.....\$198,490.00
Estimated Freight from Factory to RFM Shop\$15,000.00

Total Project Cost Including Tax and Freight.....\$495,594.00

This Quote is valid for 60 days from 4.24.24

Freight

Ex-works Factory.

Please note that due to the volatility in freight costs from our suppliers, we cannot provide firm pricing for freight charges. The freight cost provided is an estimate only and the actual freight charges will be invoiced based on cost at time of shipment. RFM does not park up freight.

Taxes

No sales tax included.

Warranty

Standard manufacturer's warranty to include parts only, labor is not included. Standard manufacturer's warranty to cover twelve (12) month from date of startup or eighteen (18) months from date of shipment, whichever occurs first.

Notes

1. The required air pollution **permit is to be obtained by others.** The boiler will be furnished to meet the 9 PPM NO_x emission limit while firing natural gas as indicated above. However, specific requirements will not be known until a permit application is submitted and an Authority to Construct is obtained from the local Air Quality Management District. The necessary application should be submitted as soon as possible. We will assist in this process and provide the necessary information for filing the permit at your request.
2. Full boiler load as necessary to perform required emissions source test to comply with Air Quality District regulations and operating personnel during tune up and emissions testing shall be provided by the owner.

Thank you for the opportunity to quote on your requirements. We trust that we will be able to review this proposal with you at your convenience.

SALE AND PAYMENT TERMS AND CONDITIONS

The following sets forth the sale and payment terms and condition policies of R.F. MacDonald Co. It constitutes the general agreement between R.F. MacDonald Co. ("R.F. MacDonald Co.", the "Company" or "we") and you, its customer, under which products, service and parts are sold, credit is extended and payments are expected.

This policy supersedes all previous sales and credit, payment terms and conditions, and finance policies issued by R.F. MacDonald Co. and shall remain in effect until further notice. The company reserves the right to change this policy and agreement at any time.

EXTENSION OF CREDIT

Credit is one of the most important services R.F. MacDonald Co. offers to you as a customer. An open line of credit is established for you based upon your needs, financial strength, and history of meeting your credit obligations.

In order to insure you the best possible prices and service, we must enforce a credit and collections policy based upon sound business principles and good judgment.

INVOICING AND PAYMENT TERMS

Payment Terms are 25% down payment, balance Net 30 (upon approval of credit) on all invoices unless other arrangements are made in advance of shipment. When opening a new account with an order, the Company may require payment with the initial order so as not to delay shipments while credit references and financial information are being reviewed. We reserve the right to suspend or terminate any further performance under this agreement or otherwise in the event payment is not made when due. **Quotes are valid for 30 days. Equipment will not be started up unless 90% of the purchase price of the equipment has been paid.**

Shipment Terms Unless otherwise specified in writing signed by an authorized representative of the Company, all shipments are Ex Works the manufacturer's factory or R.F. MacDonald Co. warehouse as applicable. Title to the merchandise shall pass to the buyer upon delivery to the carrier and thereafter all risk of loss or damage shall be the buyer's.

Service Charges We reserve the right to take action to collect any invoice which is not paid when due. We also assess a late payment SERVICE CHARGE on the day following the due date and monthly thereafter against all amounts remaining unpaid on each such date. Subject to any limitations that may be imposed by applicable law, the amount of this charge is 1½% of the amount remaining unpaid on each such date.

This policy will be applied to customers who permit their account to become delinquent. It is your responsibility to notify R.F. MacDonald Co. of any extenuating circumstances that may affect your payment and work out a solution. Please know that our interest lies not in collecting a service charge, but in receiving timely payments of your invoice.

Warranty on Equipment and Material Provided by Manufacturer:

You will rely solely on the warranty provided by the manufacturer. Your sole and exclusive remedy for breach of warranty shall be as provided in the manufacturer's standard warranty.

R.F. MacDonald Co. makes no warranty express or implied of any kind. We make no claim of fitness or merchantability or any other warranty, express or implied, nor is anyone else, whether employed by R.F. MacDonald Co., or not, authorized to do so on our behalf. We specifically disclaim the warranty of merchantability and the warranty of fitness.

You will be invoiced in the regular manner for all materials and parts even though it may be an in-warranty transaction. Credit will be issued promptly on our receipt of proof of return, and, as long as the return is within the prescribed time limit and has been properly authorized. Please note that withholding payment of any invoice in anticipation of an in-warranty credit is not allowed with our terms of sale.

For any items or components proposed as a substitute to specified items, it is understood that seller makes no guarantee that the products submitted will be accepted by the approving authority.

In no event shall R.F. MacDonald Co. be liable to you or any person, corporation or other type of legal entity for any special, direct, indirect, incidental, liquidated or consequential damage of any kind, including but not limited to, loss of products, loss of time, loss of use, loss of production, loss of savings or revenues, cost of replacement goods, labor costs or other charges in connection with product use or malfunction, the repair or replacement of defective parts whether such claims are alleged in strict liability, negligence, tort, contract or otherwise and even if R.F. MacDonald Co. is informed in advance of the possibility of such damages.

Limited Warranty on R.F. MacDonald Labor (If Applicable):



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If you are retaining the services of R.F. MacDonald Co.'s service department, R.F. MacDonald Co. warrants that labor performed will be free from defect for a period of one year from the completion of work. This limited warranty excludes remedy for damage or defect caused by accident, misuse, abuse, modifications not executed by R.F. MacDonald Co., improper or insufficient maintenance, or improper operation. Installation, operation, and maintenance shall be in accordance with the product manuals provided by the equipment manufacturer. R.F. MacDonald Co. shall be notified within ten (10) business days of first knowledge of defect by owner or its agent. R.F. MacDonald Co. shall be given first opportunity to make any repairs, replacements, or corrections to the defect within a reasonable period of time. R.F. MacDonald Co. makes no implied warranty of any kind. In no event shall R.F. MacDonald Co. be liable by virtue of this limited warranty or otherwise to you or any person, corporation or other type of legal entity for any special, indirect, incidental, liquidated or consequential damage of any kind.

CLAIMS

You are responsible for inspecting merchandise on receipt and for filing claims with the carriers for damage or loss. All claims for shortages and damages must be made in writing to the carriers within ten (10) days of receipt. We suggest you call the carrier immediately upon noticing any possible freight related damage and arrange for inspection before proceeding with unpacking. Photographs taken while the delivery truck is still on sight are recommended if possible.

Under no circumstances may you withhold payment or charge the Company for freight or warranty related claims.

No claim for expenses incurred for corrective work done on merchandise provided by the Company will be considered or accepted unless specifically agreed to in writing, in advance of the work being done, by an authorized manager of the Company.

INFORMATION AND ASSISTANCE

If at any time you have a question on an invoice from the Company, a call or note to our accounting department will bring prompt action toward getting the problem resolved.

If it becomes necessary, at R.F. MacDonald Co.'s discretion, to take legal action in order to collect your account, R.F. MacDonald Co. shall be entitled to recover, in addition to any other recovery, its court costs, reasonable attorney's fees and all other collection expenses.

If you have any questions regarding this policy, please contact our office.

We appreciate your business and look forward to providing you with reliable equipment, parts and service.

Please acknowledge below your receipt and agreement to the provisions of this policy statement.

Return the original to:

**R.F. MacDonald Co.
25920 Eden Landing Road
Hayward
Phone 510-359-6423
Fax 510-784-1004**

APPLICABLE LAW: This agreement shall be governed by the substantive laws of the State of California

Acknowledged and Agreed To:

Company Name: _____

Signature: _____

Name/Title: _____

Date: _____