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August 1, 2017

Culver City Public Works 9505 West Jefferson Boulevard Culver City, California 90232

Attention: Ashfaq Dean

Subject: Boiler Replacement

Reference: Culver City Police Department

Proposal # QUO-56295-G9W5G8 Revision 2

SAN FRANCISCO
FRESNO
LAS VEGAS
MODESTO
RENO
SAN DIEGO

The following is our proposal to fabricate a new boiler skid package, remove the old boiler skid from roof and install new boiler skid.

### **Scope of Work Installation**

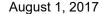
- Disconnect piping, electrical and remove existing boiler skid.
- Provide for street closure, crane and rigging and remove equipment from roof and set new boiler skid on roof.
- Provide and install new vibration isolators under boiler skid.
- Provide new 2" copper pipe and pipe fittings and connect hot water supply and return to new skid.
- Provide new ¾" copper pipe, pipe fittings and water regulator set and connect water supply to new skid.
- Provide and install new thermometers with thermos wells and pressure gauges with isolation valves on supply and return piping.
- Provide new 3/4" copper pipe and pipe fittings and run safety valve outlet to drain.
- Provide new 3/4" carbon steel pipe and pipe fittings and connect gas supply to new skid.
- Provide conduit and wiring and connect new skid to existing power supply.
- Provide and install 1 ½" fiberglass insulation with aluminum jacketing on new supply and return piping and existing supply and return piping to wall penetration..
- Provide start up service and place system in service by a factory trained technician.

## **HYDRONIC HOT WATER HEATER**

One (1) hot water boiler shall be CAMUS MicoFlame Model MFNH0200 having an input rating of 200,000 Btu/hr and 170,000 Btu/hr output for hydronic water heating. The boiler shall be a non-condensing appliance with an 85% thermal efficiency. The heating boiler shall be design/certified by CSA International and shall meet the requirements of ANSI Z21.13 & CSA 4.9. The heating boiler shall be vented as a Category I conventional appliance or a Category III appliance suitable for indoor operation.

### **BOILER DESIGN**

The combustion chamber shall be fully enclosed by high temperature fiberboard refractory, which is of modular interlocking construction for ease of replacement. The burner shall be constructed of high heat resistant ceramic tile supported in a steel casing. The burner shall provide equal distribution of heat through the entire heat exchanger. The heat exchanger shall be suitable for a MAWP of 160 psig and shall be of a two pass design employing integrally finned 7/8" copper tubes. All castings shall be bronze. A pressure relief valve shall be furnished with the heater. There shall be ready access to the heat exchanger to permit internal and external inspection and cleaning of the tubes. The boiler shall operate with 2-stage firing.





# **BOILER TRIM (MOUNTED)**

- Temperature gauge
- Operating temperature control
- High limit temperature controls w/manual reset
- High and low gas pressure switches

# **BOILER TRIM (SHIPPED LOOSE FOR FIELD INSTALLATION)**

- ASME rated pressure relief valve(s)
- Low water cut-off
- Flow switch

## **CONTROLS**

Standard controls to include factory mounted thermometers for sensing inlet and outlet temperatures, hi-limit and operator controls, on/off switch and 24 VAC class 2 transformer and light display package. SmartFlame 780007 electronic proportional integrated combination limit/operator control will be accurate to 1°F. The control shall also provide readouts of inlet/outlet temperatures and delta T as well as accumulated run hours. The control shall have 3 preset modes to allow operation of the heater as hydronic heating, DHW or remote enable. On/off switch, and full diagnostic light package are included. Flow switch is included loose.

### **EMISSIONS**

The boiler will include an emission control package designed to meet the requirements of the County Air Pollution Control District with a NO<sub>x</sub> emission limit of 9 ppm and CO limit of 100 ppm each corrected to 3% 0<sub>2</sub> while firing natural gas only.

## **REQUIREMENTS**

Electrical: 120V/1Ph/60Hz

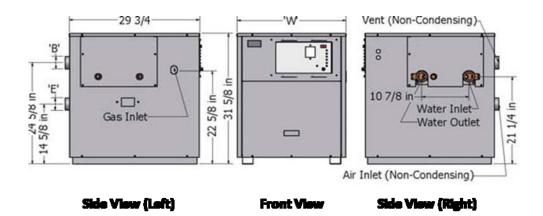
Natural Gas: 5"WC – 9"WC @ 200 CFH

## 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.



# SIZE AND RATINGS



					B. Di	a. Ve	nting	E' Dia.
	Model	<b>7</b> 0°	Water Connection	Gas Cennection	Outdoor	Sidewall or Condensing	Standard	Air Inlet
ı	MENHO60	18 3/4	1 1/2	1/2	3	3	3	3
ı	MENH100	18 3/4	1 1/2	1/2	3	3	4	3
	MENH150	18 3/4	1 1/2	1/2	3	3	4	3
	MFNH200	18 3/4	1 1/2	3/4	4	4	5	4
ı	MFNH250	25	1 1/2	3/4	4	4	5	4
ı	MFNH300	25	1 1/2	3/4	5	5	6	5
ı	MFNH400	31 1/2	2	1	5	5	6	5
	MENH500	31 1/2	2	1	6	6	7	6
ı	MENH600	36 1/2	2	1	6	6	7	6

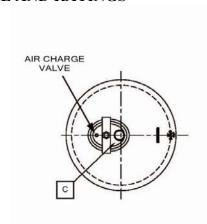


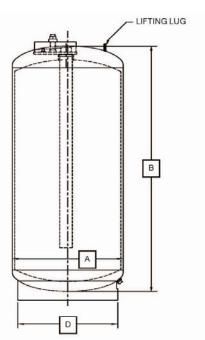
# **BLADDER-TYPE EXPANSION TANK**

TAG: ET-1

One (1) bladder type expansion tank shall be John Wood Company Model JAER-23-603. The tank shall be a 24 gallon ASME precharged vertical steel expansion tank with replaceable heavy duty butyl rubber bladder. The tank shall have a top-mounted 1" MNPT system connection and a charging valve connection (Schrader valve) with full guard to facilitate on-site charging of the tank to meet system requirements. The tank shall be fitted with a lifting lug and a base designed for vertical installation. The tank will be designed and constructed in accordance with the ASME Boiler and Pressure Vessel Code Section VIII, Division I, with a stamped MAWP of 150 PSI and a maximum design temperature of 240°F (115°C).

## **SIZE AND RATINGS**





MODEL NUMBER	MAWP	TA VOL	NK UME	A DIAMETER				C SYS CONN	BA	SE ETER	SHIP	
	PSIG	GAL	L	IN	мм	IN	мм	INCH (MNPT)	IN	ММ	LBS	ка
JAER-23-601	150	10	40	12	305	22	559	1	8%	219	50	23
JAER-23-602	150	15	60	12	305	331/2	851	1	8%	219	65	30
JAER-23-603	150	24	90	12	305	52	1321	1	8%	219	90	41
JAER-23-604	150	30	110	14	356	48	1219	1	8%	219	90	41
JAER-23-605	150	35	130	14	356	551/2	1410	1	85%	219	100	45
JAER-23-606	150	40	150	14	356	63	1600	1	85/8	219	115	52
JAER-23-607	150	60	230	16	406	72%	1838	11/2	111/2	292	155	70
JAER-23-608	125	80	300	20	508	631/4	1607	1½	18	457	175	79
JAER-23-668	125	105	400	24	610	56	1422	11/2	18	457	225	102
JAER-23-609	125	120	450	24	610	66	1676	1½	18	457	255	116
JAER-23-610	125	135	500	24	610	72	1829	11/2	18	457	285	129

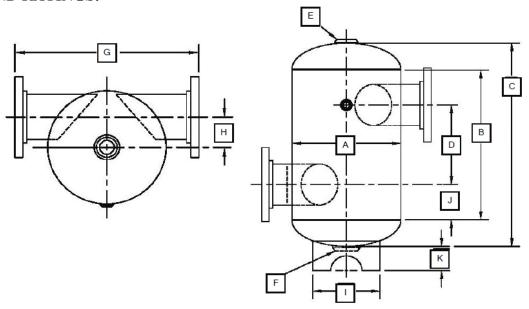


# **TANGENTIAL AIR SEPARATOR**

TAG: AS-1

One (1) John Wood Model No. JASR-19-401 ASME stamped tangential air separator. The unit shall have a 2" NPT system connection. A blowdown connection is provided to facilitate preventative maintenance and cleaning of the separator. The unit must be designed and constructed in accordance with the ASME Boiler and Pressure Vessel Code Section VIII, Division 1, with a stamped MAWP of 150 PSI.

# **SIZE AND RATINGS:**



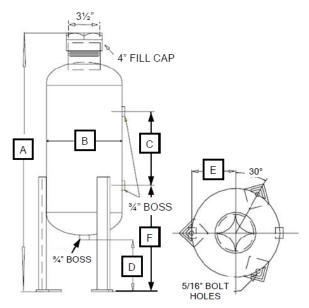
MODEL NUMBER	MAWP	OU	ILET/ ITLET & TYPE		A DIA	B DIM	OVER	C RHEADS	D DIM	E DIM	F DIM	G DIM	H DIM	I DIM	J DIM	K DIM	EST WGT
	PSIG	IN	TYPE	IN	ММ	IN	IN	ММ	IN	LBS							
JASR-19-401	150	2	NPT	12	305	13	19½	495	8	11/4	1	16%	41/4	9½	21/2	3	35
JASR-19-402	150	2½	NPT	12	305	13	191⁄2	495	8	11/4	1	16%	41/8	9½	21/2	3	35
JASR-19-403	150	3	FLG	12	305	13	19½	495	8	11/4	1	19¾	3¾	9½	21/2	21/8	70
JASR-19-404	150	4	FLG	14	356	201/4	27½	699	10¾	1½	2	21¾	41/4	11½	43/4	3	80
JASR-19-405	150	5	FLG	14	356	201/4	27½	699	10¾	2	2	21¾	3¾	11½	43/4	3	100
JASR-19-406	150	6	FLG	20	508	29	40	1016	14½	2	2	28	61/4	18	71/4	21/4	180
JASR-19-407	150	8	FLG	20	508	29	40	1016	14½	2	2	28	51/4	18	71/4	21/4	210
JASR-19-408	150	10	FLG	30	762	39	55¾	1416	19	2	2	41	91/8	24	83/8	25%	560
JASR-19-409	150	12	FLG	30	762	42	58¾	1492	21	2	2	41	81/%	24	83/8	25%	615
JASR-19-410	125	14	FLG	36	914	58	781/4	2026	31½	2	2	46%	101/4	30	131/4	21/8	950
JASR-19-411	125	16	FLG	42	1067	72	96	2438	36	2	2	46%	12½	30	18	3	1435
JASR-19-412	125	18	FLG	48	1219	77	103¾	2635	41	2	2	61½	13%	42	18	23/4	1775
JASR-19-413	125	20	FLG	54	1372	85½	115	2921	45	2	2	66	16	48	201/4	21/8	2530
JASR-19-414	125	24	FLG	66	1676	92½	130	3302	47½	2	2	78	19	60	221/4	3	4900



# **CHEMICAL BY-PASS FEEDER**

TAG: PF-1

One (1) chemical by-pass feeder shall be John Wood Company Model JWVF-28-002. The unit shall have a working pressure of 300 PSI at 200° F. The shell will be carbon steel with an exterior finish of primer with enamel top coat. System connection is <sup>3</sup>/<sub>4</sub>".



MODEL NUMBER	APPROX. CAPACITY		A HEIGHT		B DIAMETER		C DIM	D DIM	E DIM	F DIM	SHIP	
	GAL	L	IN	ММ	IN	ММ	IN	IN	IN	IN	LBS	KG
JWVF-28-002	2	8	311/4	794	6	152	12¾	8%	41/8	13¼	23	10
JWVF-28-005	5	19	29¾	756	10	254	10½	8	61//8	13	38	17

# **SECONDARY SYSTEM PUMPS**

TAG: HWP-1 & HWP-2

Two (2) Grundfos secondary pumps. Each pump will be sized to replace existing pumps.

# **SKID-MOUNTED PACKAGE**

The equipment above shall be skid-mounted, pre-piped and wired as shown in the preliminary drawing below. A 120V/1Ph/60Hz electrical panel shall be included for a single point power connection. The panel shall include pump contacts and circuit breakers for the boilers and pumps.



<b>PRICIN</b>	G
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One complete skid-mounted package as described above including tax is......\$39,995.00

# **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 shipment.

## **Shipment**

Based on current production schedules, shipment can be made 10-11 weeks after approval of factory drawings or after receipt of order with waiver of drawing approval plus the transit time from the factory to destination.

# **Notes**

- 1. No specification was provided. RF MacDonald reserves the right to update pricing if a specification becomes available.
- 2. Piping shall be threaded steel on boiler skid.
- 3. Boiler sequencing controls by others.
- 4. Any required air pollution or city *permits are to be obtained by others*.
- 5. Full boiler load as necessary will be required to perform required start-up

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.

Acceptance:	Date:
(Signature of person	on authorized to purchase)
Print Name of Person:	
Purchase Order No.	
Regards;	

Roy K. Atkins
Roy K. Atkins
Boiler Service Aftermarket Sales
R.F. MacDonald Company



#### 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 principals 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):

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 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, CA 94545 Phone: (510) 784-0110 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:	