

CAMERON S. MCCORMICK
ASSISTANT DIRECTOR OF FINANCE
540.332.3948



DEPARTMENT OF FINANCE
PURCHASING & RISK MANAGEMENT

ADRIENNE D. HAMMEL
FINANCE CLERK
540.332.3809

INVITATION TO BID
June 6, 2018

BID TITLE: BTW BOILER REMOVAL & REPLACEMENT

BID #: F00118

BID OPENING DATE: Friday, June 29, 2018, 2:00 PM

SITE VISIT REQUIRED: YES – Must be completed by Tuesday June 18, 2018, by 2:00 PM

BID BOND REQUIRED: Yes

The City of Staunton is seeking bids from qualified and properly licensed contractors to provide all material, equipment, labor and supervision to remove an existing Burnham, Natural Gas-Fired Steam Boiler Model 4FL-345-40-G-GP, and replace it with a Burnham, Natural Gas-Fired Steam Boiler Model 4FHL-345-G-50-WEB. NO EXCEPTIONS. All work will be done at the City of Staunton, Booker T. Washington Community Center, 1000 West Johnson Street, Staunton Virginia. All work shall be in accordance with the specifications contained herein. Any questions regarding the specifications for this bid should be directed to Timothy C. Powell, Facility Services/Refuse Superintendent, at (540) 332-3882, powelltc@ci.staunton.va.us.

Please quote lowest price and best delivery on items listed. Advise what discount, if any will be allowed for payment within a specified time. Terms and delivery date must be specified.

Right is reserved to accept or reject bids on each item separately or as a whole, to reject any or all bids, to waive informalities or irregularities, to negotiate contract terms and options with the successful low bidder, and to contract for the bid to other than the lowest bidder in the best interest of the City of Staunton to the extent allowable by law.

The City does not discriminate against small and minority businesses or faith-based organizations.

All bids must be submitted in a sealed envelope plainly marked, Bid No. **F00118 – BOILER REPLACEMENT**, with the name and address of the bidder in the upper left hand corner and accompanied by complete specifications for the items offered. **E-Mail and facsimile responses are not acceptable.** No responsibility will attach the Owner or any official or employee thereof for the pre-opening of, post-opening of, or the failure to open a proposal not properly addressed and identified.

BIDS RECEIVED AFTER THE DATE AND TIME SPECIFIED WILL BE REJECTED
BIDS MUST BE SEALED, MARKED, AND DELIVERED TO:

Mail To:
City of Staunton
Cameron S McCormick
Assistant Director of Finance
P.O. Box 58
Staunton, VA 24402-0058

Overnight To:
City of Staunton
Cameron S McCormick
Assistant Director of Finance
116 W Beverley St., 3rd Floor
Staunton, VA 24401

Phone: (540) 332-3948

**CITY OF STAUNTON
PURCHASING DEPARTMENT
GENERAL TERMS, CONDITIONS, AND INSTRUCTIONS**

1. **SUBMISSION AND RECEIPT OF BIDS:**

- (A) Bids, to receive consideration, must be received prior to the specified time and date of opening as designated in the invitation. E-mail and facsimile submittals are not acceptable.
- (B) Unless otherwise specified, bidders must use the bid form furnished by the City. Failure to do so may cause bid to be rejected. Removal of any part of the bid form may invalidate the bid.
- (C) Bids having any erasures, corrections, or typewriter opaquing fluid are not acceptable and will result in rejection of the bid. Prior to submission or opening, errors may be crossed out, corrections entered in ink and initialed in ink by the person signing the bid. No bid shall be altered or amended after the specified time for opening.
- (D) All bids shall be either typewritten or filled in with ink in order to be considered. Also, all bids must be signed in ink in order to be considered.
- (E) Bids concerning separate bid invitations must not be combined on the same form or placed in the same envelope. Bids submitted in violation of this provision may not be considered.
- (F) When specified, each bid shall be accompanied by a bid bond with surety satisfactory to the City or a cashier's or certified check, made payable to the Treasurer, City of Staunton, in an amount equal to 5 per cent of the total bid price. In the event of default by the bidder the 5 per cent deposit shall be and represent liquidated damages to the City.

2. **ANNUAL CONTRACT USAGE REQUIREMENTS:** Whenever a bid is sought seeking a source of supply for an annual contract for products or services, the quantities or usage shown are estimates only. No guarantee or warranty is given or implied by the City of Staunton as to the total amount that may or may not be purchased from any resulting contracts.

3. **PRICING:**

- (A) Bidder warrants by virtue of bidding that prices, terms, and conditions quoted in his bid will be firm for acceptance for a period of sixty (60) days from the date of bid opening unless otherwise stated by the City or bidder.
- (B) Prices should be stated in units of quantity as specified in the bid form. In case of error in extension of prices in the bid, the unit price shall govern.
- (C) Bids based on a firm price or those including a "Downward Escalator" clause for an annual contract period may be given preference over lower ones bearing an "Escalator" clause for an annual contract period.
- (D) When an annual contract is not requested by the City, and the bid is for products or services to be delivered on a one time only or staggered basis, only firm pricing shall be given consideration. General terms such as "Price in effect at time of delivery" shall be cause for rejection of bid.

4. **PERFORMANCE BOND:** When requested in the bid, the City shall require the successful bidder to furnish a performance bond and labor and material payment bond with surety satisfactory to the City in the amount of contract price at the time of or prior to execution of the contract. If no bond is furnished by the successful bidder, the City reserves the right to award the contract to the next lowest responsible bidder with the next lowest responsive bid.

5. **DELIVERY POINT:** All items shall be delivered F.O.B. destination, and delivery costs and charges included in the bid price. Failure to do so may be cause for rejection of bid. The bidder shall assume all liability and responsibility for the delivery of merchandise in good condition to the specified delivery location(s).

6. **CASH DISCOUNTS:** Cash discounts will be considered in determining the award.

7. **BRAND NAMES:** Unless otherwise provided in the invitation for bid, the name of a certain brand, make, or manufacturer does not restrict bidders to the specific brand, make, or manufacture mentioned; it conveys the general style, type, character, and quality of the equipment desired. The City shall determine in its sole discretion equipment bid to be equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted.

8. **SPECIFICATIONS:** The bidders must also indicate any variances from our specification and/or conditions, NO MATTER HOW SLIGHT. If variations are not stated in the bid, it will be assumed that the product or service fully complies with our specifications. The Purchasing Department is not responsible for locating or securing any information which is not included in the bid. Accordingly, to insure that sufficient information is available, the bidder must furnish as part of his bid all descriptive material, (i.e., Catalog Cuts, illustrations, drawings, specifications, or other information) necessary for the Purchasing Department to determine whether the goods or services offered meet the salient characteristic requirements of the bid.

9. **LATEST MODEL/QUALITY:** Bidder shall bid on the latest model, design, etc. of this type of equipment by the manufacturer of which he represents. Equipment shall be new and unused.

10. **NOTICE OF AWARD:** Notice of award will be posted at <http://www.staunton.va.us/solicitation-results>.

CITY OF STAUNTON BID FORM

Item Description**Price**

Burnham Natural Gas-Fired Steam Boiler
Model 4FHL-345-G-50-WEB 3 Pass Fire Tube 15psi.
NO EXCEPTIONS, delivered and Installed:

\$ _____

Removal and Disposition of Existing Boiler
and exhaust piping:

\$ _____

TOTAL

\$ _____

Option #1 – Install new condensate pump
Per technical specification #2 and Attachment B:

\$ _____

Guaranteed Installation Date: _____

Warranty: _____

PER ATTACHED SPECIFICATIONS

OFFER

To Purchasing Department:

In compliance with the bid information, the undersigned offers and agrees, if this offer is accepted within _____ calendar days (30 calendar days unless a different period is inserted by the purchaser) from the bid open date specified above, to furnish any or all items upon which prices are offered, at the price set opposite each item, delivered at the designated point(s), within the time specified.

Bidder guarantees shipment from _____ via _____ within _____ days after receipt of order. FOB: Staunton TERMS: _____

COMPANY NAME _____

BY: _____

PRINTED NAME

SIGNATURE

STREET ADDRESS _____

CITY AND STATE _____

VA STATE CONTRACTOR LICENSE NO/TYPE ... _____

SCC NUMBER. (See General Condition #19) .. _____

E-MAIL..... _____

PHONE: _____ FAX: _____

BOOKER T. WASHINGTON BOILER REMOVAL AND REPLACEMENT SPECIFICATIONS

I. SCOPE

The City of Staunton is requesting sealed bids from qualified and properly licensed contractors to supply all labor, materials, equipment, insurance and supervision to remove an existing, Burnham, Natural Gas-Fired Steam Boiler Model 4FL-345-40-G-GP, and replace it with a Burnham, Natural Gas-Fired Steam Boiler Model 4FHL-345-G-50-WEB. **NO EXCEPTIONS.** Installation shall be turn-key and bids shall include all necessary labor, parts, equipment and controls for full-system operation. Features for the equipment to be installed are included as Attachment A. Installation shall be in accordance with the manufacturer's specifications and all other specifications contained herein.

All interested contractors are required to visit the site at 1000 West Johnson Street, Staunton, Virginia prior to submitting quotes. Site visits may be arranged by contacting Tim Powell at 540-332-3882 or by e-mail at powelltc@ci.staunton.va.us. All site visits must be scheduled and completed between Tuesday, June 13 and Monday, June 18, 2018. At the time bids are received, each contractor will be presumed to have inspected the job site and satisfied himself as to the nature and location of the work, the character of the equipment and facilities needed preliminary to and during the prosecution of the work, the general conditions and all other matters which in any way affect the work under this contract.

Prior to submitting their bid, it is the bidder's responsibility to check the City web-site (<http://www.staunton.va.us/solicitations>) for any addenda associated with this Invitation for Bid. All questions must be submitted in writing to Tim Powell no later than Tuesday, June 19, 2018 at 2:00 p.m. All responses and any addenda issued will be available on the City web site by noon on Wednesday, June 20, 2018.

No verbal agreement or conversation with any officer, agent, or employee of the City either before or after the execution of this contract shall affect or modify any of the terms or obligations herein contained.

NOTE: New boiler MUST be completely installed and fully operational by October 19, 2018.

II. TECHNICAL SPECIFICATIONS

1. New Steam Boiler shall be a Burnham commercial 4FH forced draft steel firebox with high efficient water-backed primary heat absorbing surface. Boiler shall also include Relief Valve, Condensate Neutralization Kit, Low Water Cut-Off and Strainer. See standard Burnham Series Boiler Features in attachment A. Installation shall comply with the manufacturer's specifications and must meet all applicable local, state and federal codes.
2. Contractor must list guaranteed installation completion date on the bid sheet.

3. Contractor shall remove and discard the existing Burnham Natural Gas-Fired Boiler and existing exhaust piping by best means possible.
4. Contractor shall replace existing single wall gas vent pipe with Type B, Double Wall Gas Vent Pipe sized in accordance with manufacturer's recommendations. All sizing shall comply with all current Building and Mechanical Codes.
5. Contractor shall furnish all necessary materials needed for complete installation and shall be responsible for ensuring that such materials and associated installation methods meet all applicable local, state, and federal codes.
6. Option #1: Contractor shall remove and replace Condensate Pump with ShipCo Pump Model 100EMV15-25, ½ HP, 15 GHP, 25 PSIG, in accordance with attachment "B".

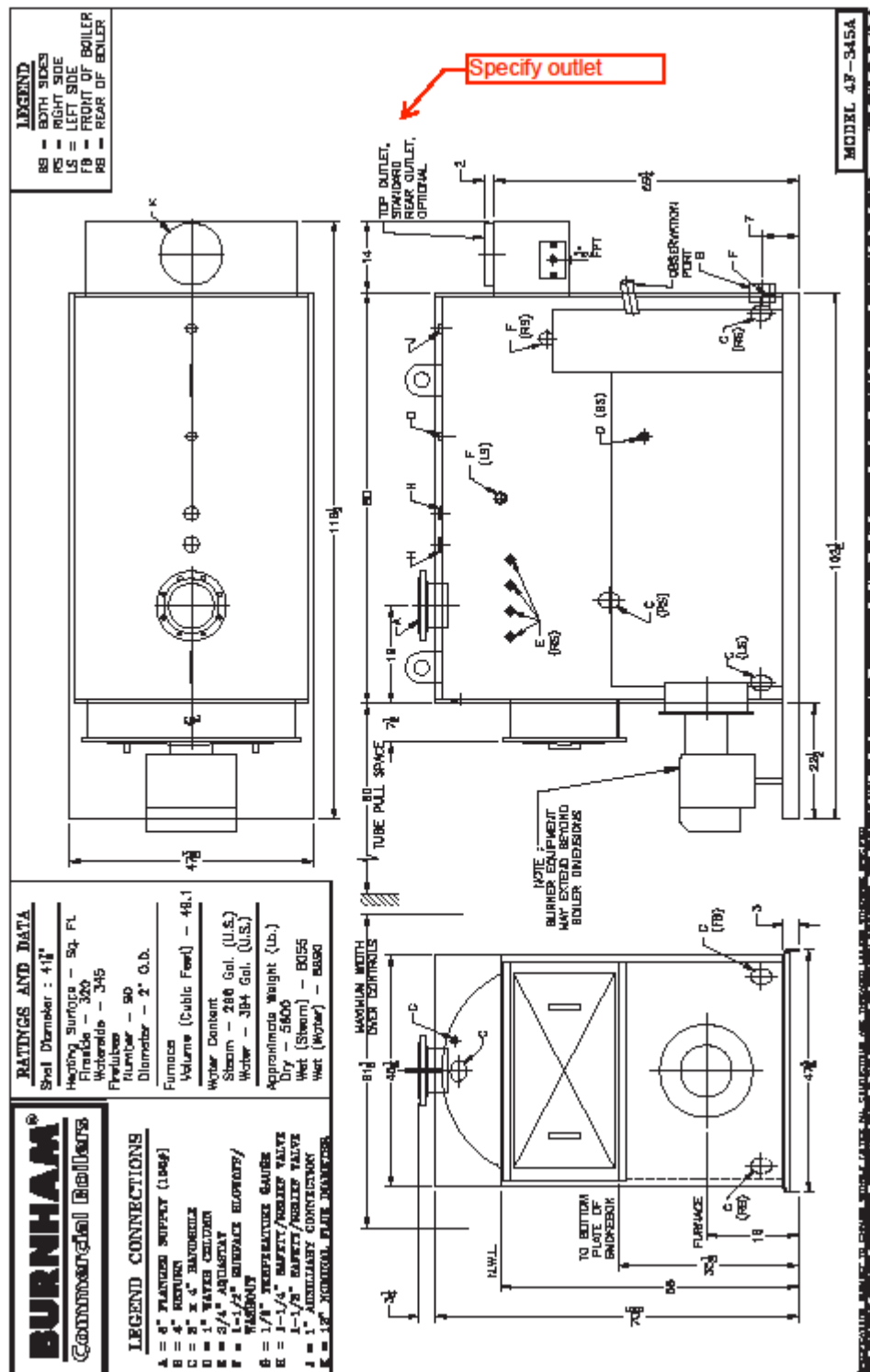
NOTE: The City of Staunton will be responsible for disconnecting and reconnecting the existing TAC system controls as necessary for removal and replacement of the new boiler system.

III. GENERAL CONDITIONS

1. Contractor shall provide, with their bid submission, a listing of previous clients that may be contacted as a reference. The contractor must have a minimum experience of three (3) projects of similar size and complexity that have been completed within the last two (2) years. Include customer name, project description and telephone number.
2. Contractor shall provide all warranties including equipment, material defects, appearance, workmanship and performance. Warranties must be of industry standards but not less than one (1) year and will not commence until the City has given the successful bidder written acceptance of the product and its installation.
3. Following installation of the new boiler and at no additional cost to the City, the contractor shall provide on-site training for City staff and maintenance contractor in the care, cleaning and maintenance of the new system.
4. All paperwork, including but not limited to, brochures, equipment specifications, and installation and maintenance manuals shall be provided to the City upon completion and before final payment is made.
5. The contractor shall specify environmental requirements, if any, which the City will need to meet prior to starting the work, e.g., power, water or space needs etc.
6. During the course of the work, the contractor shall cause as little inconvenience as possible to the public, City employees or scheduled activities within the building, and will maintain the work site free from any conditions that may result in danger or nuisance to the public, City employees or their daily work schedule.

7. All equipment including, but not limited to scaffolding, lifts and ladders, etc., shall be provided by the successful contractor, at their cost, and must meet all applicable OSHA, local, state and federal safety codes.
8. The successful contractor must obtain, at his or her own cost, a City of Staunton business license and any required City Permits before beginning work. License and Permits may be obtained at the City Hall, 116 West Beverley Street, Staunton.
9. Appropriate City personnel will make payment for all completed work only after final approval and acceptance of the work completed.
10. A tax-exempt certificate will be provided to the successful contractor on request.
11. Insurance - Contractor agrees to provide the City of Staunton a copy of their General Liability, Vehicle Liability, and Worker's Compensation Insurance prior to beginning work. Insurance shall be in amounts not less than \$1,000,000, \$500,000, and \$500,000 respectively or such other insurance as is satisfactory and may be approved by the City. Insurance shall be written by companies licensed to do business in the Commonwealth of Virginia and shall list the City as an additional insured.
12. Hold Harmless: The Contractor shall indemnify, defend and hold harmless the City, its members of Council, officers, directors, agents and employees, against any and all claims, liabilities, losses, damages, costs and expenses (including reasonable attorney fees) arising out of, or resulting from any and all injuries to persons or damage to property arising out of services performed hereunder or by reason of the intentional or negligence acts or omissions of the Contractor, its employees, agents or sub-consultants, including any independent contractors. The provisions of this section of the Agreement shall survive the completion, termination or expiration of the Agreement.
13. Drug Free Workplace: During the performance of this contract, the contractor agrees to (i) provide a drug-free workplace for the contractor's employees; (ii) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, possession, or use of a controlled substance or marijuana is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the contractor that the contractor maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000.00, so that the provisions will be binding upon each subcontractor or vendor.
14. Immigration Reform and Control Act Of 1986 – During the performance of this contract, contractor agrees that they will not, and shall not knowingly employ an unauthorized alien as defined in the federal Immigration Reform and Control Act of 1986. (per 2.2-4311.1)

15. Forum Selection: Any action, proceeding, or claim in any way related to this agreement or the relationship between the parties shall be filed and maintained solely in the General District Court or the Circuit Court of the City of Staunton, Virginia.
16. Prompt Payment Act: Any contract awarded as a result of this Bid shall incorporate the terms and conditions of Article 4 of the Virginia Public Procurement Act with respect to Prompt Payment.
17. Negotiation with Successful Bidder: The City reserves the right to negotiate contract terms with the successful contractor for items/services other than those specifically stated in this Invitation to Bid in the best interest of the City and agreed to by the contractor in accordance with section 2.2-4318 of the Code of Virginia. Additional work of reasonable scale shall be priced consistent with proposal to allow for additions and future expansions.
18. Cooperative Procurement: This procurement is being conducted on behalf of other public bodies, in accordance with § 2.2-4304 (A) of the Code of Virginia. If authorized by the bidder, the resultant contract may be extended to any public body in the Commonwealth of Virginia in accordance with contract terms.
19. Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include in its bid or proposal a statement describing why the bidder or offeror is not required to be so authorized
20. Site Visit: All interested contractors are required to visit the site at 1000 West Johnson Street, Staunton, Virginia prior to submitting quotes. Site visits may be arranged by contacting Tim Powell at 540-332-3882 or by e-mail at powelltc@ci.staunton.va.us. All site visits must be scheduled and completed between Tuesday, June 13 and Monday, June 18, 2018. At the time bids are received, each contractor will be presumed to have inspected the job site and satisfied himself as to the nature and location of the work, the character of the equipment and facilities needed preliminary to and during the prosecution of the work, the general conditions and all other matters which in any way affect the work under this contract.
21. Bid Questions and Addenda: Prior to submitting their bid, it is the bidder's responsibility to check the City web-site (<http://www.staunton.va.us/solicitations>) for any addenda associated with this Invitation for Bid. All questions must be submitted in writing to Tim Powell no later than Tuesday, June 19, 2018 at 2:00 p.m. All responses and any addenda issued will be available on the City web site by noon on Wednesday, June 20, 2018.



BURNHAM
Commercial Boilers

**HEAVY STEEL
CONSTRUCTION**

**COMPACT,
EASY TO CLEAN**

**SAVE ON
INSTALLATION,
OPERATION &
MAINTENANCE**

**15 PSI STEAM,
30 OR 60 PSI
WATER**

ECONOMICAL



Series 4FH
FORCED DRAFT FIREBOX BOILER

Series 4FH FORCED DRAFT FIREBOX BOILER

The Versatile Boiler

The Burnham Commercial 4FH forced draft steel firebox boiler is a consistent sales leader in the heating industry. Its compact design saves on installation, operation and maintenance.

4FH Saves in Operation

- The furnace surrounds the firebox with highly efficient waterflooded primary heat absorbing surfaces. This large combustion chamber is easy to fire and overcomes carry over draft losses without flame impingement or other critical firing problems.
- A dual fuel burner allows you to burn the most economical fuel or the most readily available fuel at the flip of a switch and affords you leverage in negotiating fuel prices.
- The 4FH is an economical heat source, whether used singly or in multiples. In fact, 4FHs with modulating burners may be sequenced to operate in a step-fired system more cost effectively than a large number of space saver boilers when ongoing maintenance costs are considered.

4FH Saves on Maintenance

- Superior design makes the 4FH easy to clean and maintain—requiring no special tools, materials or skills.
- Opening the front fire door allows firetubes to be knocked out quickly, unlike the water tubes used in some boilers which can be virtually impossible to clean.
- Elaborate or expensive proprietary seals are not required to re-close the doors as with some boilers.
- As a wetback boiler, there is no delicate or expensive rear refractory to maintain.

*No patina liner—available for visible area.



Standard Equipment

Boiler:

The boilers are a three-pass design constructed and steam rated in accordance with ASME Section IV of the ASME Code for 15 psig steam or 30 psig water on any size boiler or 60 psig water on sizes 4FH163 through 4FH1659. They are the sealed forced draft firing design with solid base and floor insulation. The fire outlet is a top outlet on sizes 4FH63 through 4FH645 and a rear outlet on sizes 4FH650 and larger. Optional outlets are available on all sizes. The boiler comes complete with a gas tight first fire door and a rear observation port on sizes 4FH63 through 4FH65, or rear access door and observation port on sizes 4FH650 and larger and lifting lugs on sizes 4FH127 and larger. Optional access doors and lifting lugs are available for all sizes.

Jackets:

Rectangular type 1-inch fiberglass insulated jacket on sizes 4FH63 through 4FH145, 2-inch fiberglass insulated rectangular jacket on sizes 4FH150 through 4FH175 and 2-inch fiberglass wrap around jacket on sizes 4FH127 and larger.

Steam Trim:

The following trim is shop mounted and wired: MARISS combination pump control and LWCO with alarm contacts and quick opening blowoff valves, probe type manual reset auxiliary LWCO, operating pressuretrol, manual reset high limit pressuretrol and appropriate firing rate control when required.

The following trim is shipped loose for field mounting: 3.5-inch steam pressure gauge (on models 4FH163 through 4FH175), 6-inch steam pressure gauge (on models 4FH127 and larger), ASME side outlet safety valve(s) and gauge glass set.

Water Trim:

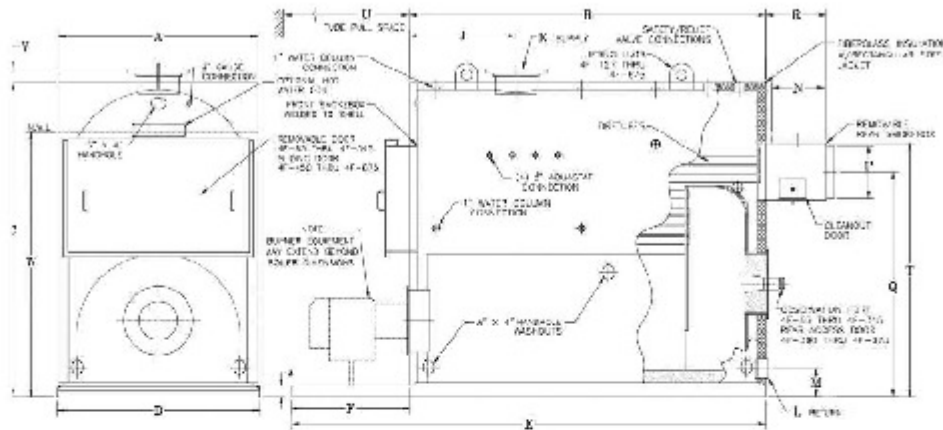
The following trim is shop mounted and wired: probe type LWCO (on 30 psig models 4FH163 through 4FH175) or MARISS manual reset LWCO with quick opening blowoff valve (on 30 psig models 4FH127 and larger) or probe type LWCO (on 60 psig models 4FH163 through 4FH175) or MARISS manual reset LWCO with quick opening blowoff valve (on all 60 psig boilers on models 4FH127 and larger), operating aquastat, manual reset high limit aquastat and appropriate firing rate control when required.

The following trim is shipped loose for field mounting: 3.5-inch thermometer (on models 4FH163 through 4FH175) or 5-inch thermometer and 6-inch pressure/altitude gauge (on models 4FH127 and larger) and loose ASME side outlet relief valve(s).

Burner:

As selected for the fuel to be burned, mounted and wired. Refer to burner data sheets for details of burner equipment.

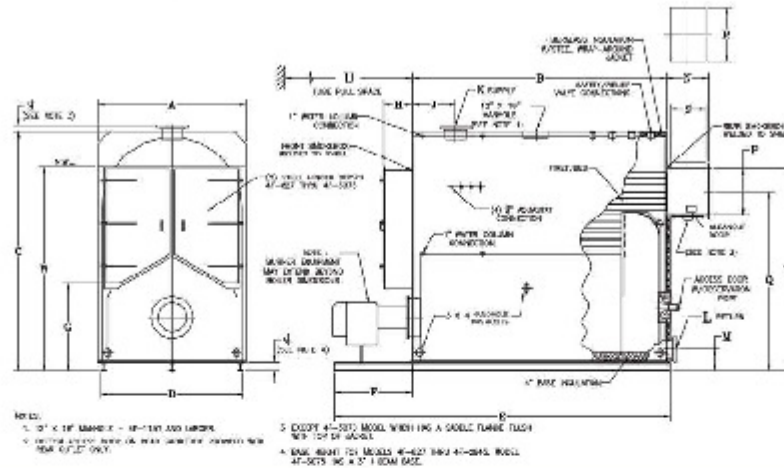
Series 4FH MODELS 63 – 675


DIMENSIONS (INCHES)

4FH Boiler Models	63	75	90	107	127	154	180	205	240	277	311	346	383	420	458	500	675
A – Boiler Width	31	31	31	31	36 3/8	36 3/8	36 3/8	36 3/8	40 1/8	40 1/8	40 1/8	40 1/8	42 3/8	42 3/8	42 3/8	44 3/8	44 1/2
B – Boiler Length	32	38	45 1/2	52 1/2	66 5/2	73	81	90	97	106	115 1/2	124	133 1/4	142 1/4	151 1/4	160 3/4	173 1/4
C – Boiler Height	55 1/4	55 1/4	55 1/4	55 1/4	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8	63 4/8
D – Base Width	33 1/4	33 1/4	33 1/4	33 1/4	38 4/8	38 4/8	38 4/8	38 4/8	42 3/8	42 3/8	42 3/8	42 3/8	44 3/8	44 3/8	44 3/8	46 3/8	46 1/2
E – Base Length	47 1/2	44 1/2	45	51	64	72 5/2	80 1/2	88 1/2	95 1/2	102 1/2	110	118 1/4	126 1/4	134 1/4	142 1/4	150 3/4	163 1/4
F – Base Extension	18 5/2	18 5/2	18 5/2	18 5/2	18 1/2	18 1/2	18 1/2	18 1/2	18 5/2	18 5/2	18 5/2	18 5/2	18 5/2	18 5/2	18 5/2	18 5/2	18 5/2
G – Front Service Box Height	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8	30 5/8
H – Front Service Box Depth	5 1/2	5 1/2	5 1/2	5 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2	6 1/2
J – Supply Location	20	25	31	37	54	61	68	75	82	89	96	103	110	117	124	131	138
KL – Supply Size	4	4	4	4	6	6	6	6	6	6	6	6	6	6	6	6	6
RL – Return Size	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4
AL – Return Location	6 1/2	6 1/2	6 1/2	6 1/2	7	7	7	7	7	7	7	7	7 3/8	7 3/8	7 3/8	7 3/8	7 3/8
N – Top Vent Collar Diameter	7	7	7	7	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2
P – Rear Vent Collar Diameter	—	—	—	—	—	—	—	—	—	—	—	—	14	14	14	14	14
Q – Rear Vent Collar Height	30	30	30	30	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2	30 5/2
R – Service Box Depth	9	9	9	9	11	11	11	11	11	11	11	11	11	11	11	11	11
T – Top Vent Collar Height	42 1/2	42 1/2	42 1/2	42 1/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2	50 5/2
U – Side Pull Space	32	38	45 1/2	52 1/2	66 5/2	73	81	90	97	106	115 1/2	124	133 1/4	142 1/4	151 1/4	160 3/4	173 1/4
V – Supply Fitting Height	1 1/2	1 1/2	1 1/2	1 1/2	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4	2 1/4
W – Normal Water Line Height	43 3/4	43 3/4	43 3/4	43 3/4	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2	51 5/2

*V and W are 1/2" female flared, 1/2" male fittings are flanged. 1/2" NPT fittings. Specifications and dimensions data subject to change without notice.

Series 4FH MODELS 827 – 3075



DIMENSIONS (INCHES)

4FH Boiler Models	827	991	1157	1323	1654	1985	2195	2645	3075
A - Boiler Width	68	84	78	78	75	82	82	82	88
B - Boiler Length	104-1/4	129	114-1/2	104	104-1/2	126	140	140	140
C - Boiler Height	85-3/16	95-3/16	106-3/4	106-3/4	123-3/8	142-3/8	142-3/8	142-3/8	171-1/8
D - Base Width	61	61	67	67	75	74	79	74	88
E - Base Length	134-1/4	161	136-1/2	126	124-1/2	170	180	200	229
F - Base Extension	30	30	48	48	48	48	48	48	48
G - Front Service Box Height	28-1/8	29-3/4	35-11/16	36-11/16	41-3/8	45-3/8	55-1/8	55-3/8	66-3/4
H - Front Service Box Depth	12-3/4	12-3/4	15-1/2	15-1/2	16-1/2	15-1/2	15-1/2	15-1/2	15-1/2
J - Supply Location	22	22	22	22	22	22	22	22	22
*K - Supply Size	8	8	8	8	10	12	12	12	12
*L - Return Size - Steam Return Size - Water	4 4	4 4	4 4	4 4	4 4	4 4	4 4	4 4	4 4
M - Return Location	10-1/4	10-3/4	11-1/2	11-3/4	11-1/8	11-3/2	11-1/2	11-3/2	16-1/2
N - Rear Service Box Depth	15-3/8	16-3/4	16-1/2	16-3/4	21-1/2	23-3/8	23-1/2	23-3/8	25-3/8
P - Rear Vent Collar Diameter	28	28	22	22	24	28	28	28	30
Q - Rear Vent Collar Height	65-3/16	68-3/16	74-11/16	74-11/16	88-11/16	106-3/16	106-3/16	106-3/16	118-3/2
R - Top Vent Collar Width	22	22	25	24	25	34	34	34	41
S - Top Vent Collar Depth	15	15	15	15	15	30	29	30	29
T - Top Vent Collar Height	75-1/8	76-3/8	82-1/4	82-3/4	100-5/8	125-1/4	125-1/4	125-1/4	125-5/16
U - Tube Pull Space	100	101	116-1/2	105	112-1/2	130	130	130	140
W - Normal Winter Line Height	74-1/4	76-3/4	86-3/4	86-3/4	104-1/2	119-3/2	116-1/2	119-3/2	130

*F on PTH is optional, F settings on Range, 1/2" H2O pressure. Specifications and dimensions are subject to change without notice.

©2017 Burnham Commercial • P.O. Box 3939, Lancaster, PA 17604

Phone: 888.791.3790 • www.burnhamcommercial.com

Form No. PLN1409571000-4/12-2-2014 Printed in the U.S.A.

BURNHAM
Commercial Boilers

Series 4FH-50 FORCED DRAFT FIREBOX GENERATOR

Model	INPUTS			GROSS OUTPUT					GAS EFFICIENCIES				OIL EFFICIENCIES			
	Gas Input MMBtu	Oil Input MMBtu	Oil Input GPH	Water		Steam		lb./hr.	Water		Steam		Water		Steam	
				MMH	BHP	MMH	BHP		Comb. EFF. %	Therm. EFF. %	Comb. EFF. %	Therm. EFF. %	Comb. EFF. %	Therm. EFF. %	Comb. EFF. %	Therm. EFF. %
43A	528	384	3.6	451	12.9	425	12.7	438	84.8	81.8	84.3	81.4	87.8	84.8	87.8	83.3
73A	833	630	4.5	533	13.9	526	13.7	562	84.8	81.8	84.6	81.3	87.7	84.7	87.6	83.6
93A	779	743	5.3	629	18.8	621	18.5	640	84.8	81.7	84.6	81.6	87.7	84.6	87.7	83.7
107A	895	888	8.2	732	21.9	722	21.6	745	84.9	81.8	84.6	81.7	87.8	84.9	87.7	83.8
127A	1,089	1,032	7.3	871	26.0	859	25.7	886	84.9	82.0	84.6	81.6	87.8	85.0	87.7	83.9
154A	1,295	1,246	8.9	1,099	31.6	1,044	31.2	1,076	85.0	82.2	84.7	81.5	87.9	85.2	87.8	84.1
180A	1,585	1,456	10.4	1,240	37.0	1,222	36.5	1,260	85.0	82.3	84.7	81.1	88.0	85.4	87.8	84.2
208A	1,790	1,680	12.8	1,444	43.1	1,428	42.5	1,487	85.1	82.5	84.8	81.3	88.0	85.6	87.8	84.4
240A	2,085	1,932	13.8	1,662	46.7	1,638	46.0	1,688	85.2	82.7	84.8	81.5	88.1	85.8	87.9	84.6
277A	2,379	2,240	16.8	1,924	57.5	1,896	56.6	1,954	85.3	83.0	84.9	81.7	88.2	86.1	87.9	84.8
311A	2,685	2,526	17.9	2,164	64.2	2,133	63.7	2,189	85.3	83.2	84.9	82.0	88.3	86.3	88.0	85.0
346A	2,884	2,786	19.9	2,400	72.0	2,373	70.9	2,446	85.4	83.4	85.0	82.2	88.4	86.5	88.1	85.2
388A	3,075	2,898	20.7	2,577	75.3	2,479	74.0	2,555	85.4	83.5	85.0	82.3	88.4	86.5	88.1	85.3
438A	3,289	3,036	25.9	2,771	94.7	2,720	93.3	2,718	85.6	84.1	85.3	82.6	88.7	87.3	88.3	85.6
503A	4,713	4,536	32.4	4,081	119.5	3,937	117.6	4,058	85.9	84.9	85.3	83.5	89.0	88.0	88.4	86.5
675A	5,690	5,496	38.9	4,934	144.3	4,758	142.1	4,980	86.2	85.6	85.3	84.2	89.3	88.6	88.6	87.2
827	6,521	6,428	47.7	5,514	176.7	5,400	174.1	6,088	86.1	85.4	85.4	84.2	89.2	88.5	88.5	87.2
995	8,370	8,032	57.3	7,084	211.6	7,080	209.1	7,715	86.0	85.2	85.3	84.2	89.1	88.3	88.4	87.3
1157	9,883	9,332	68.8	8,335	246.0	8,159	243.7	8,888	85.9	85.0	85.1	84.2	89.0	88.0	88.3	87.3
1323	11,871	10,719	76.5	9,383	288.6	9,328	278.7	9,614	85.9	84.6	85.0	84.3	88.9	87.7	88.2	87.3
1654	13,445	13,158	94.7	11,678	348.6	11,575	345.7	11,927	85.4	84.3	84.7	83.8	88.9	88.0	88.2	87.1
1985	16,673	13,880	113.3	14,825	418.4	13,880	414.9	14,514	85.3	84.3	84.6	83.6	88.9	88.1	88.3	87.3
2315	18,234	16,578	122.7	16,388	468.6	16,255	465.6	16,753	85.6	84.6	84.9	83.9	89.0	88.2	88.3	87.4
2645	22,135	21,151	151.3	18,795	561.4	18,698	558.4	19,209	85.8	84.9	85.0	84.2	89.1	88.4	88.3	87.6
3075A	25,734	24,736	176.7	21,974	623.4	21,694	618.1	22,389	85.6	85.0	85.1	84.3	89.2	88.4	88.4	87.6

Model	MMH NET RATINGS			HEATING SURFACE - SQ. FT.		WATER CONTENT - GAL.		APPROX. WEIGHT - LBS.		
	Water		Steam	Firebox	Wesside	Steam	Water	Dry Weight	Full Weight	
	MMH	MMH	Sq. Ft.						Steam	Water
43A	374	379	1,327	59	83	81	86	1,700	2,288	2,428
73A	484	394	1,649	73	78	76	107	1,980	2,538	2,795
93A	547	466	1,940	86	92	90	127	2,180	2,846	3,188
107A	687	542	2,257	101	107	108	146	2,480	3,278	3,698
127A	759	644	2,605	128	127	117	161	2,700	3,678	4,048
154A	931	785	3,369	146	154	139	191	3,100	4,288	4,695
180A	1,076	917	3,620	189	189	162	222	3,380	4,645	5,133
208A	1,256	1,081	4,594	194	208	187	257	3,680	5,155	5,745
240A	1,445	1,260	5,250	224	240	207	276	4,280	5,838	6,588
277A	1,671	1,471	6,129	257	277	236	317	4,680	6,575	7,245
311A	1,881	1,656	6,982	289	311	267	355	5,380	7,515	8,265
346A	2,095	1,843	7,677	328	346	298	394	5,680	8,855	9,898
388A	2,189	1,924	8,916	388	388	479	509	6,980	10,820	11,645
438A	2,757	2,424	10,089	458	457	537	666	8,280	13,188	14,255
503A	3,479	3,054	12,735	563	622	664	888	9,380	14,875	15,975
675A	4,307	3,884	15,399	675	746	787	947	11,808	17,538	18,885
827	5,141	4,526	18,058	827	903	961	1,083	13,208	19,538	21,525
993	6,189	5,436	22,646	993	1,072	1,025	1,220	14,308	22,875	24,475
1157	7,141	6,284	26,391	1,157	1,280	1,280	1,330	17,608	26,348	28,485
1323	8,168	7,343	30,177	1,323	1,429	1,227	1,354	18,808	28,888	32,788
1654	10,148	8,985	37,638	1,654	1,788	1,443	1,626	23,808	35,878	38,208
1985	12,178	10,783	44,828	1,985	2,148	1,688	2,147	28,808	41,965	45,878
2315	14,253	12,620	52,884	2,315	2,580	1,836	2,473	34,808	50,965	55,885
2645	16,341	14,670	60,288	2,645	2,857	2,180	2,718	38,208	55,868	60,828
3075A	18,021	16,043	70,179	3,075	3,321	2,688	3,382	48,808	71,375	76,985

Ratings based on 5 square feet of heating surface per boiler horsepower.
* Light Oil - 140,000 BTU/GAL.

Series 4FH FORCED DRAFT FIREBOX GENERATOR

Instantaneous Hot Water Heating Coils

Coil Nom. Size	*For Use in the Following Boiler Sizes Subject to Capacity Limitation of Boiler	RATED CAPACITY—GALLONS HEATED** 40° TO 140° F BOILER WATER TEMPERATURE		
		100° F GPM	200° F GPM	212° F GPM
BMA-270	All sizes	3.5	4.3	5.3
BMA-300	All except 4'-0"	5.0	6.3	7.9
BMA-330	All sizes	6.0	7.5	9.3
BMA-450	All except 4'-0"	7.5	9.3	11.7
BMA-620	4'-10" and larger, also 4'-10"	10.0	12.5	15.6
BMA-750	4'-10" and larger, also 4'-10"	12.5	15.6	19.4
BMA-900	4'-10" and larger	15.0	17.5	21.3
BMA-1125	4'-10" and larger	18.0	21.3	26.2
BMA-1350	4'-27" and larger, also 4'-20"	22.5	26.2	35.0
BMA-1500	4'-30" and larger	25.0	31.3	38.0

*Two coils of any size or combination of sizes may be installed in 4N-1157 and larger.

** Intermittent draw ratings



©2017 Burnham Commercial
P.O. Box 3939 • Lancaster, PA 17604
Phone: 800.791.3790 • Fax: 717.293.5803
www.burnhamcommercial.com
Form No. P131458321002-07/17-0000
Printed in the U.S.A.

Specification**Boilers:****4FHL-345-G-50-WEB**

Furnish and install _____ forced draft firetube steel factory packaged boilers for (No. _____ oil) (Natural gas) (combination _____ gas and No. _____ oil) complete with fuel burning equipment, safety and operating controls, and appurtenances as hereinafter specified.

1. Boiler unit(s) shall be Burnham Commercial Model 4F _____ as manufactured by Burnham Commercial, for (15 ~~psi steam)~~ (30 psi water) ~~(50 psi water)~~ service, and shall have a gross output of 2373 MBH.

2. Boiler unit(s) shall contain not less than 5 sq. ft. of fireside heating surface and not less than _____ cubic feet of furnace volume. ~~Heat release in the firebox shall not exceed _____ BTU/hr. per cubic foot.~~

3. Boiler pressure vessel shall be constructed, tested, and marked in accordance with the ASME code for low pressure heating boilers and shall be registered with The National Board of Boiler and Pressure Vessel Inspectors.

4. The unit(s) shall be of 3-pass firebox design with two passes of horizontal firetubes. All tubes shall be roller expanded at each end and shall be flared. Unit(s) shall be sealed for pressurized firing, shall have welded on skid base with factory installed firebox floor insulation, gas-tight front flue door, and gas-tight rear smokebox with (rear) (top) outlet. A Pyrex glass observation port shall be provided at the rear of the firebox, units larger than 320 square feet fireside heating surface shall have the observation port installed in a 18 inch diameter rear access door.

5. Unit(s) shall be provided with factory installed enamel finish jacket and not less than 1 inch thick fiberglass insulation.

*8a. Trim and controls for steam units shall consist of steam pressure gauge, water gauge set, ASME safety valve(s), low water cut-off, operating pressure control, high limit pressure control, [firing rate control with ~~(to H-H)~~ or (modulating) sequence], flue cleaner brush with handle. Units larger than 875 square feet heating surface shall be provided with a pump controller combined with the low water cut-off.

~~*8b. Trim and controls for water units shall consist of pressure-temperature gauge and thermometer, ASME relief valve(s), low water cut-off, operating temperature control, high limit temperature control, [firing rate control with (10h L-H) or (modulating) sequence], flue cleaner brush with handle.~~

~~*7. Unit(s) shall be equipped with Model _____ built-in tankless heater coil installed in the water space at the front of the boiler, with capacity to heat _____ GPH of domestic water from 40° F to 140° F with boiler water at _____ °F.~~

8. Fuel Burning Equipment: The burner(s) shall be factory installed and wired, shall incorporate all necessary devices and controls to make a complete fuel burning system for the type of fuel hereinafter specified, and shall bear the listing label of Underwriters Laboratories, Inc. evidencing compliance with requirements of UL-298 for oil burners, and/or UL-785 for gas burners.

~~*Oil burners for No.2 oil shall be of the forced draft pressure atomizing type, complete with integral motor driven blower, oil pump, oil nozzle(s), oil solenoid valve(s), ignition assembly, combustion safeguard, motor starters, and all necessary controls for safe and efficient operation in accordance with UL requirements (and FM requirements) (and IRI requirements).~~

Note: Insert additional details such as desired combustion safeguard, firing sequence, and/or other features to meet project requirements.

~~*Oil burners for (No.2 oil) (No.4 oil) (No.5 oil) (No.6 oil) shall be of the forced draft low pressure air atomizing type, complete with integral motor driven blower, air compressor, oil supply pump, atomizing assembly, ignition assembly, combustion safeguard, motor starters, and all necessary controls for safe and efficient operation in accordance with UL requirements (and FM requirements) (and IRI requirements).~~

Note: Insert additional details such as desired combustion safeguard, firing sequence, oil heating equipment for heavy oil, and/or other features to meet project requirements.

ATTACHMENT A – PAGE 9

*Gas burners shall be of the forced draft multi-jet type suitable for burning gas with heat content of _____ BTU per cubic foot and specific gravity of (_____ inches w.c.) (_____ psig). Burner shall be complete with integral motor driven blower, ignition assembly, combustion safeguard, motor starter, complete gas train, including gas pressure regulator and dual gas valves, and all necessary controls for safe and efficient operation in accordance with UL requirements (and FM requirements) (and IRI requirements).

Note: Insert additional details such as desired combustion safeguard, firing sequence, and/or other features to meet project requirements.

~~*Combustion gas/oil burner shall consist of an integral assembly of a forced draft pressure atomizing oil burner suitable for burning No.2 oil and a forced draft multi-jet type gas burner suitable for burning _____ gas with a heat content of _____ BTU per cubic foot and specific gravity of _____ delivered to the gas train inlet at a pressure of (_____ inches w.c.) (_____ psig). Burner shall be complete with integral motor driven blower, oil pump, oil nozzle(s), oil solenoid valve(s), ignition assembly, combustion safeguard, motor starters, complete gas train including gas pressure regulator and dual gas valves, and all necessary controls for safe and efficient operation in accordance with UL requirements (and FM requirements) (and IRI requirements). Changeover to either fuel shall be by means of a manual selector switch which shall energize only those circuits necessary to provide the appropriate timing and sequence of events for the fuel selected, except that the oil pump may continue to operate when firing gas. No burner adjustments or re-positioning of control linkage shall be required when changing from one fuel to the alternate fuel.~~

Note: Insert additional details such as desired combustion safeguard, firing sequence, and/or other features to meet project requirements.

~~*Combustion gas/oil burner shall consist of an integral assembly of a forced draft low pressure air atomizing oil burner suitable for burning (No.2 oil) (No.4 oil) (No.5 oil) (No.6 oil) and a forced draft multi-jet gas burner suitable for burning _____ gas with a heat content of _____ BTU per cubic foot and specific gravity of _____ delivered to the gas train inlet at a pressure of (_____ inches w.c.) (_____ psig). Burner shall be complete with integral motor driven blower, air compressor, oil supply pump, atomizing assembly, ignition assembly, combustion safeguard, motor starters, complete gas train including gas pressure regulator and dual gas valves, and all necessary controls for safe and efficient operation in accordance with UL requirements (and FM requirements) (and IRI requirements). Changeover to either fuel shall be by means of a manual selector switch which shall energize only those circuits necessary to provide the appropriate timing and sequence of events for the fuel selected, except that the oil pump may continue to operate when firing gas. No burner adjustments or repositioning of control linkage shall be required when changing from one fuel to the alternate fuel.~~

Note: Insert additional details such as desired combustion safeguard, firing sequence, and/or other features to meet project requirements.

8. Electrical supply to the boiler(s) will be _____ volts _____ hz _____ phase. All control circuits shall be 120 volts, 60 hz, 1 phase, with all switches in the ungrounded leg. Fuse protection for the control circuit shall be provided.



SHIPPENSBURG PUMP CO. INC.
 P.O. BOX 270, SHIPPENSBURG, PA 17267
 PH 717-632-7321 • FAX 717-632-7704
 WWW.SHIPCO-PUMP.COM

Pride
Quality
Craftsmanship

BULLETIN 106
Revised 3/14



Standard Equipment:
 Mechanical Make-up Valve
 (for supply pressure
 up to 60 PSIG)

TYPE EMV **ECONOMICAL MAKE-UP VERTICAL** **BOILER FEED UNITS**

*NOTE: If unit is used as a surge tank,
 pumps should run continuously*

EMV-P Units handle condensate up to 210°F
 with low NPSH requirements.

Centrifugal Pumps designed for many years of
 dependable service with low maintenance.

3500 RPM provides low inertia for intermittent
 operation.

Heavy Wall Steel Receiver.

Mechanical make-up valve with float and rubber
 fitted sealing face.

Pump has no internal bearings. (Motor bearings
 refer to motor manufacturer's instructions.)

Gauge Glass Assembly for viewing water level.

Two Pump openings on all units.

ODP Motors Only

SHIPCO PUMPS are equipped with Mechanical Seals rated up to a standard 250°F.
Higher temperature seals and special faces available upon request.

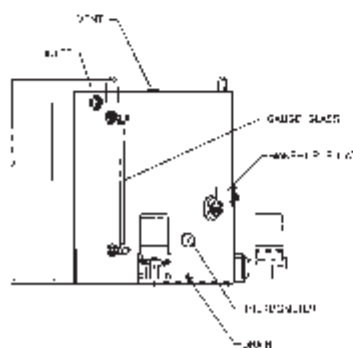
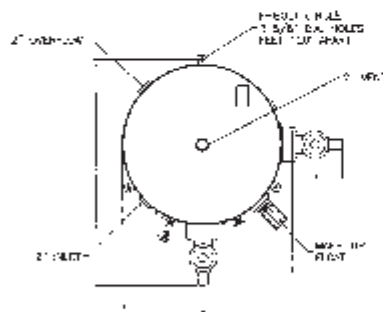
SECTION EMV – PAGE 0100

CATALOG SELECTIONS FOR EMV MODEL D PUMPS

HP	GPM	PSIG	DISCH. SIZE	PUMP TYPE	RECEIVER NUMBER 30	RECEIVER NUMBER 50	RECEIVER NUMBER 100	RECEIVER NUMBER 200
1/2	18	25	3/4	118	30EMV18-30	50EMV18-30	100EMV18-30	200EMV18-30
1/2	18	25	3/4	118	30EMV18-35	50EMV18-35	100EMV18-35	200EMV18-35
1/2	18	35	3/4	158	30EMV18-30	50EMV18-30	100EMV18-30	200EMV18-30
3/4	18	40	3/4	158	30EMV18-40	50EMV18-40	100EMV18-40	200EMV18-40
1/2	22-1/2	25	1	118	30EMV22-30	50EMV22-30	100EMV22-30	200EMV22-30
3/4	22-1/2	25	1	158	30EMV22-35	50EMV22-35	100EMV22-35	200EMV22-35
3/4	22-1/2	35	1	158	30EMV22-30	50EMV22-30	100EMV22-30	200EMV22-30
1	22-1/2	40	1	158	30EMV22-40	50EMV22-40	100EMV22-40	200EMV22-40
3/4	30	25	1	118	30EMV30-30	50EMV30-30	100EMV30-30	200EMV30-30
3/4	30	25	1	158	30EMV30-35	50EMV30-35	100EMV30-35	200EMV30-35
1	30	35	1	158	30EMV30-30	50EMV30-30	100EMV30-30	200EMV30-30
1	30	40	1	158	30EMV30-40	50EMV30-40	100EMV30-40	200EMV30-40

CATALOG SELECTIONS FOR EMV-P MODEL P PUMPS

HP	GPM	PSIG	DISCH. SIZE	PUMP TYPE	RECEIVER NUMBER 30	RECEIVER NUMBER 50	RECEIVER NUMBER 100	RECEIVER NUMBER 200
1/2	8	25	3/4	118	30EMVP8-25	50EMVP8-25	100EMVP8-25	200EMVP8-25
1/2	8	25	3/4	118	30EMVP8-35	50EMVP8-35	100EMVP8-35	200EMVP8-35
3/4	8	35	3/4	118	30EMVP8-40	50EMVP8-40	100EMVP8-40	200EMVP8-40
1/2	12	25	3/4	118	30EMVP12-25	50EMVP12-25	100EMVP12-25	200EMVP12-25
3/4	12	25	3/4	118	30EMVP12-35	50EMVP12-35	100EMVP12-35	200EMVP12-35
3/4	12	35	3/4	118	30EMVP12-40	50EMVP12-40	100EMVP12-40	200EMVP12-40
1/2	15	25	3/4	118	30EMVP15-25	50EMVP15-25	100EMVP15-25	200EMVP15-25
3/4	15	25	3/4	118	30EMVP15-35	50EMVP15-35	100EMVP15-35	200EMVP15-35
1	15	35	3/4	118	30EMVP15-40	50EMVP15-40	100EMVP15-40	200EMVP15-40
3/4	22	25	1-1/2	118	30EMVP22-25	50EMVP22-25	100EMVP22-25	200EMVP22-25
3/4	22	25	1-1/2	118	30EMVP22-35	50EMVP22-35	100EMVP22-35	200EMVP22-35
1	22	35	1-1/2	118	30EMVP22-40	50EMVP22-40	100EMVP22-40	200EMVP22-40



RECEIVER NO.	30	50	100	200
TANK DIMENSIONS	18-7/8 x 34	18-7/8 x 39	30 x 58	36 x 88
A	30-1/2	30-1/2	41-5/8	48-5/8
B	20-3/4	20-3/4	31-7/8	36-7/8
C	9	9	9	9
100 & 110 PUMP				
C	12	12	12	12
D	25-3/4	25-3/4	25-3/4	25-3/4
E	22-3/16	34-3/16	34-3/16	34-3/16
INLET & OVERFLOW				
F	20-5/8	20-5/8	31-1/2	36-1/2
INLET	2"	2"	2"	2"
OVERFLOW	2"	2"	2"	2"
VENT	2"	2"	2"	2"
NET STORAGE GAL.	28	33	66	132

NOTE IF ORDERING A SUCTION ISOLATION VALVE B DIMENSION WILL INCREASE BY 1-1/2".

ACCESSORIES AVAILABLE:

Thermometers

Inlet Strainers

Isolation Valves

Discharge Pressure Gauges

Optional Solenoid Valve with or without

Air Gap Assembly

Control Panels (mounted or not)

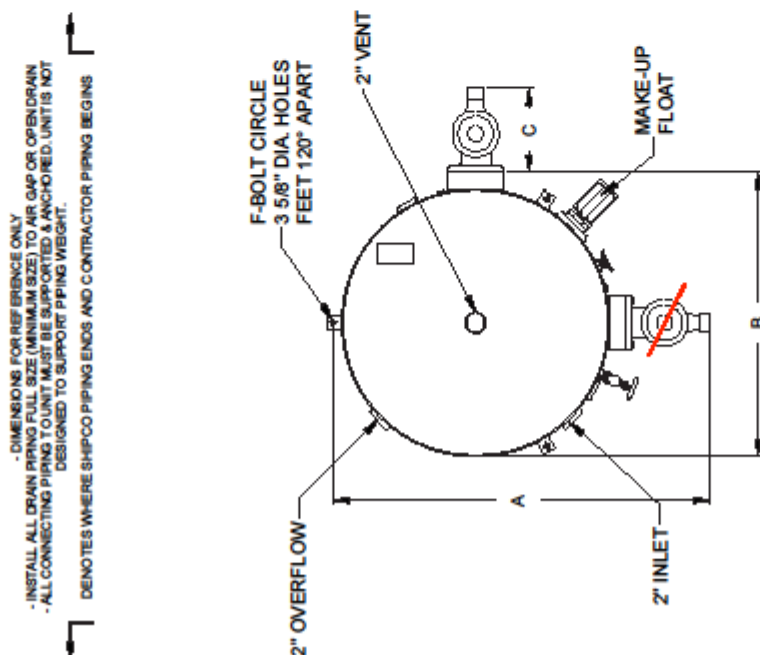
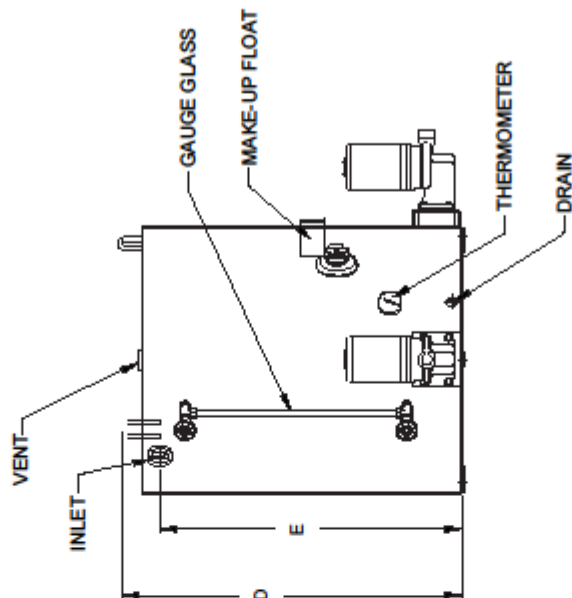
FORM BULL 106 Revised 2/94

SHIPPENSBURG PUMP COMPANY, INC., P.O. BOX 278, SHIPPENSBURG, PA 17257 • PHONE 717-582-7321 • FAX 717-582-7704 • WWW.SHIPCOPUMP.CO.COM
 PRINTED IN THE U.S.A. • DESIGN PRINTING HOUSE, INC., 717-588-0465

SHIPCOP is a REGISTERED TRADEMARK OF SHIPPENSBURG PUMP CO., INC.
 COPYRIGHT © 2014 SHIPPENSBURG PUMP COMPANY, INC.

Rec No.	Trunk	Gallon	A	B	C	D	E	F	Inlet	Overflow	Vent	Drain
					100 & 110	116						
30	18" x 24	20	30%	20%	9	12	20%	22%	20%	2	2	3/4
50	18" x 36	33	30%	20%	9	12	30%	34%	20%	2	2	1
100	30 x 36	66	41%	31%	9	12	30%	34%	30%	2	2	1 1/2
200	38 x 36	132	46%	36%	9	12	30%	34%	30%	2	2	2

NOTE: IF ORDERING A SUCTION ISOLATION VALVE DIMENSION WILL INCREASE BY 1/2".



**TYPE EMV
BLACK STEEL RECEIVER**

NAME & ID	DATE	WHS	WHS
J. ROBINSON	9/15		0
ENV UNITS			

SHIPCO®
PUMPS

MANUFACTURED BY
SHIPPENSBURG PUMP COMPANY INC.
P.O. Box 279 • Shippensburg, PA 17257
PHONE 717 632-7321 • FAX 717 632-7704
www.sbpumps.com