

GAMA

PROCEDURAL GUIDE



for

I=B=R

INDIRECT-FIRED

WATER HEATER RATINGS

March 2003 Edition

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RATING PROCEDURE FOR INDIRECT-FIRED WATER HEATERS

March 2003

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RATING PROCEDURE FOR INDIRECT-FIRED WATER HEATERS

RATING INDIRECT-FIRED WATER HEATERS

1.0 PURPOSE

The purpose of this Procedure is to specify methods and procedures to establish the terms on which I=B=R Ratings and the I=B=R Emblem may be used.

2.0 SCOPE

2.1

This Procedure relates to the verification of performance of Indirect-Fired Water Heaters designed for installation with a hot water boiler or some other external source of heated water.

2.2

This procedure is limited to Indirect-Fired Water Heaters having a total system volume of 120 gallons or less.

2.3

This Procedure does not apply to direct-fired instantaneous or storage water heaters, tankless water heaters or heat pumps water heaters. This procedure also does not apply to combination space heating and water heating appliances.

3.0 DEFINITIONS

COMBINATION SPACE HEATING AND WATER HEATING APPLIANCE -

A unit designed to provide space heating and potable water heating from a single primary energy source.

INDIRECT-FIRED STORAGE WATER HEATER -

A water heater consisting of a potable hot water storage tank equipped with an internal or external heat exchanger used to transfer heat to the stored potable water from an external source.

INDIRECT-FIRED INSTANANEOUS WATER HEATER -

A water heater consisting of a tank which contains hot water from an external source and a heat exchanger used to transfer heat from this stored water to the potable water.

TANKLESS WATER HEATER -

A heat exchanger for indirect heating of domestic water, designed to be used without a domestic water storage tank. It may be attached directly to the boiler, or installed external to the boiler and connected by piping.

4.0 REQUIREMENTS

Water heating performance parameters of continuous draw rating, first draw rating, and standby loss, shall be determined from tests conducted in accordance with the current version of GAMA's Testing Standard for Indirect-Fired Water Heaters (IWH-TS-1).

4.1 NUMBER OF UNITS TO BE TESTED

Each model and size shall be tested, except those meeting the requirements of Section 4.2

4.2 TANK STORAGE PERFORMANCE DETERMINATION

4.2.1 STANDBY TEST

Where a single tank size and configuration is equipped with different heat exchangers, only one standby test is required.

4.2.2 FIRST DRAW TEST

Where a series of storage type water heaters are identical except for the heat exchanger size, a first draw test is only required on one model in the series. The results of this test may then be applied to the entire series.

5.0 PROCEDURE FOR OBTAINING I=B=R INDIRECT-FIRED WATER HEATER RATINGS

5.1 PURPOSE

5.1.1

The purpose of this Section is to prescribe the method of obtaining I=B=R ratings for Indirect-Fired Storage or Instantaneous Water Heaters. It provides for tests by GAMA at any Laboratory selected by the applicant on units in a series to be rated. All tests shall be conducted in accordance with the provisions of the GAMA Testing Standard for Indirect-Fired Water Heaters (IWH-TS-1), as amended and in effect at the time application for approval of ratings is submitted.

5.1.2

The Indirect-Fired Water Heater Rating Committee consisting of the President, the Certification Director and one additional staff member appointed by the President (hereinafter referred to as the "Rating Committee") shall have authority to make final determinations, not inconsistent with any specific provision herein, on any and all questions that arise under this Rating Procedure, subject to Paragraph 10 of the License.

5.1.3

The provisions of this Rating Procedure and License may be amended as provided in the License.

5.2 COPYRIGHT OF STANDARD AND REGISTRATION OF EMBLEM

Ownership of the copyright covering this Rating Procedure is vested in GAMA and its assignees. GAMA has registered the I=B=R Emblem (See Figure 1) with the United States Commissioner of Patents and Registrar of Trade Marks of Canada,

and may cause the Emblem to be registered in such states and other countries as it may determine.

5.3 RIGHT TO USE RATINGS AND EMBLEM

5.3.1

Rights to use I=B=R Ratings and the I=B=R Emblem, are controlled through Licenses granted by GAMA. A copy of the License is included in the Appendix. Only manufacturers who produce or assemble complete indirect-fired storage or instantaneous water heaters and who sell complete indirect-fired storage or instantaneous water heaters, are eligible to become Licensees.

5.3.2

Anyone desiring to use I=B=R Ratings need not become a member of GAMA, but no one is entitled to use the I=B=R Ratings or the I=B=R Emblem, or purport to use the same, by inference or otherwise, or to state that any ratings are based on this Rating Procedure, or that any product has been tested or rated in conformance with the procedures outlined in the Testing Standard for Indirect-Fired Water Heaters (IWH-TS-1) or this Rating Procedure; unless and until the manufacturer has been authorized to do so by virtue of the execution of a License with GAMA, and unless and until the manufacturer has received written approval from the President of GAMA of such I=B=R Ratings, except as provided in Section 5.3.3.

5.3.3

Any purchaser of a product for which an I=B=R Rating has been duly and properly obtained by the Licensee pursuant to the terms of the Rating Procedure and the terms of the License, shall have the right to use such I=B=R Ratings and I=B=R Emblem in connection with the resale of the product so purchased, but only on the terms and conditions set forth in the License and this Rating Procedure, including the requirement that minimum data be shown on the water heater and in trade literature in connection with the use of said Emblem and said Rating. In the event that a Licensee sells a product for which an I=B=R Rating has been approved to a purchaser who intends to sell it under the purchaser's name or any trade name or catalog designation different from the Licensee's, then prior to the use of the I=B=R Rating and the I=B=R Emblem in connection therewith, there must be filed with GAMA a completed Form IWH-PC-1 consisting of a certification by The Licensee and the purchaser that such a product is identical in every respect to the product for which the I=B=R Rating was approved, accompanied by a copy of Form IWH-PR-1 and the right of the purchaser to use the I=B=R Rating and the I=B=R Emblem, shall be effective only upon receipt by the purchaser and the Licensee of Form IWH-IBRP-1, duly executed by the President of GAMA. The purchaser must also (i) file with GAMA copies of its nameplate or serial plate and trade literature in the manner provided in Section 5.6; (ii) file additional copies of such material with the Licensee, and (iii) agree to file copies of all future editions of such material with both GAMA and the Licensee. The Licensee must use its best efforts to see that no purchaser uses I=B=R Rating or the I=B=R Emblem, except in strict accordance with the foregoing.

5.4 PROCEDURE

5.4.1 REQUEST FOR TESTING

5.4.1.1

A manufacturer who desires to have its units rated under this Rating Procedure may request such I=B=R Ratings by submitting to GAMA, a Form IWH-IBR-1 covering all sizes, for which approval is desired.

5.4.1.2

The Form IWH-IBR-1 shall be accompanied by:

- (1) Dimensional Data including dimensional drawings showing the design of the water heater(s) being rated.
- (2) If tests are to be performed on pre-production units, a certification that production units will have the same dimensions as the test unit.

5.4.2 PROCESSING OF REQUEST FOR I=B=R RATINGS

5.4.2.1

The Rating Committee shall review the manufacturer's request for I=B=R Ratings and shall determine the model of each series to be tested.

5.4.2.2

The GAMA office shall inform the applicant as to the models selected and shall schedule a proposed date for the test(s).

5.4.3 TESTING PROCEDURE

5.4.3.1

A sample of at least one model of each series, being tested by the manufacturer or testing laboratory under the GAMA Testing Standard for Indirect-Fired Water Heaters (IWH-TS-1) and this Rating Procedure, shall be tested by a representative of GAMA prior to certification of the series. The test results shall be at least 98% of the values for continuous draw and first draw and no more than 110% of standby loss claimed by the manufacturer. This test shall be considered a precertification test of the series.

5.4.3.2

Testing at the manufacturer's site or testing agency site. The manufacturer or testing agency shall provide the test unit, suitable space, calibrated instrumentation as per Section 4.0 of the Testing Standard for Indirect-Fired Water Heaters (IWH-TS-1), appropriate apparatus as per Section 5.0 of that standard, and qualified personnel to assist the GAMA representative in conducting the tests. Failure to comply shall be cause for the GAMA representative to cancel the test.

5.4.3.3

The GAMA representative shall see that all requirements of Section 6.0 - Test Conditions; Section 7.0 - Procedures; Section 8.0 - Data to be Recorded; Section 9.0 - Calculation of Results; and Section 10.0 - Test Report of the Testing Standard for Indirect-Fired Water Heaters (IWH-TS-1), are observed and implemented.

5.4.3.4

Immediately upon completion of testing, the GAMA representative shall verify the dimensional data report, which may require the test unit to be dismantled and measured. The GAMA representative may photograph any or all components of the test unit and associated testing equipment.

5.4.4 DATA ASSEMBLED BY GAMA

Data for each heater tested:

Report Sheet Form No. IWH-R-1

Standby Test Log Form No. IWH-ST-1

First Draw Test Log Form No. IWH-FD-1

Continuous Draw Test Log Form No. IWH-CD-1

Volume Log Form No. IWH-V-1

5.4.5 DETERMINATION OF I=B=R RATINGS

The I=B=R Ratings shall be the Standby Loss, expressed to the nearest 100 Btu/hr, the Continuous Draw Rating expressed to the nearest gallon, and the First Hour Rating, expressed to the nearest gallon, as calculated from the test data.

5.5 APPROVAL OF I=B=R RATINGS

5.5.1

The results of the precertification test shall be reviewed by the Rating Committee. The only determinations which the Rating Committee shall make are (1) The Standby, Continuous, and First Hour Rating is approved or (2) is not approved. (See Section 4.0 of this Procedure).

5.5.1.1

In the event that the Rating Committee shall determine that the Standby, Continuous, and First Hour Rating is verified, GAMA's President or his designated representative shall notify the manufacturer of that fact and shall advise the manufacturer that I=B=R Ratings could be approved.

5.5.1.2

The manufacturer shall submit Form IWH-IBR-1, showing the requested I=B=R Ratings for each size and the additional catalog data called for.

5.5.2

If the Rating Committee approves the requested ratings, GAMA's President shall give formal notification to that effect to the applicant. If the applicant already has a License, such notice will constitute authorization for the use of the requested I=B=R Ratings and Catalog Data prescribed in Section 5.6 of this Rating Procedure. If the manufacturer does not have such license, such authorization will be effective only upon the execution by GAMA and by the applicant of such a License. One copy of the Licensee's nameplate or serial plate and literature showing approved I=B=R ratings and Catalog Data prescribed in Paragraph 5.6.1 must be filed with The Institute as soon as possible after approval of the ratings. One copy of all future editions of such nameplate or serial plate and copy of literature must be filed with GAMA as soon as possible after issuance.

5.5.3

Disputes as to tests or ratings shall be determined as provided in the License or in this Rating Procedure.

5.5.4 DATA TO BE KEPT CONFIDENTIAL

All data and information furnished, to the Rating Committee and GAMA, pursuant to the provisions of any section of this Rating Procedure shall be considered confidential and shall not be voluntarily disclosed to any person or persons except as otherwise provided in this Rating Procedure, and except that after a Rating has been approved.

Such examination shall be conducted at GAMA's Offices, at such times as GAMA's President may determine.

5.6 MINIMUM DATA REQUIRED IN LITERATURE LISTING I=B=R RATINGS

The following minimum data must be published in all literature in which I=B=R Ratings are shown or which contain statements or representations, expressed or implied, to the effect that ratings have been determined as prescribed in this Rating Procedure (including, without limitation, any catalogs, installation instructions, bulletins, circulars, advertisements, price sheets, or other items that contain I=B=R Ratings, or such statements or representations), provided, however, that literature may contain statements, or representations, that ratings have been determined as prescribed in this Rating Procedure, or that indicate that Indirect-Fired Water Heaters have I=B=R Ratings without including the minimum data listed below if such literature (i) does not contain the actual ratings, and (ii) makes a specific reference to and positive identification of other literature that is customarily distributed with and usually accompanies the literature in question and that contains all the required minimum data, including the actual approved ratings.

5.6.1 MINIMUM DATA TO BE SHOWN IN LITERATURE

Model number

First hour rating in gal./hr.

Continuous draw rating in gal./hr.

Standby heat loss rating in degrees per hour

Minimum heat output rate of the heat source in Btu/hr.

Minimum heat source flow rate, gpm

The wording including the ratings "These ratings were obtained with a heat source output rate of _____ Btu/hr at a heat source flow rate of _____ gpm. Other results will be obtained under different conditions."

I=B=R emblem with the notation ®

5.6.2 OTHER DATA SHOWN IN LITERATURE

In addition to the data required under 5.6.1, the manufacturer may also show data on the literature that is obtained by methods other than those outlined in the referenced testing standard as long as it is clear that the I=B=R mark only applies to the data required under section 5.6.1.

5.6.3 MINIMUM DATA TO BE SHOWN ON INDIRECT-FIRED WATER HEATER

Model number

First hour rating

Heat Source Output Required, labeled "I=B=R Heat Source Output"

I=B=R emblem with the notation ®

5.7 RENEWAL AND VERIFICATION OF RATINGS

5.7.1 ANNUAL VERIFICATION TESTING

5.7.1.1

On an annual basis, the Rating Committee shall determine the specific models of Indirect-Fired Water Heaters to be tested. The number of tests will be a minimum of 20 percent of the manufacturer's currently listed basic models, with a minimum of one test. The number of tests to be conducted shall be rounded up to the next whole unit.

5.7.1.2

GAMA's President or his designated representative shall notify the manufacturer as to the number of models to be tested.

5.7.1.3

A representative of GAMA shall arrange a mutually acceptable test date.

5.7.1.4

The GAMA representative shall personally select the test samples from stock.

5.7.1.5

Tests shall be conducted according to Section 5.4.3. The calculated results from these tests shall be at least 95% of the original continuous draw and first draw rating and no more than 110% of the original standby loss rating.

5.7.1.6

The results of the test shall be transmitted by the GAMA representative to the Rating Committee and the manufacturer.

5.7.1.7

The test results shall be reviewed by the Rating Committee. The only determinations, which the Rating Committee shall make, are (1) the specific model is verified, or (2) the specific model is not verified.

5.7.1.8

In the event that the Rating Committee shall determine that the specific model is verified, GAMA's President or his designee shall notify the manufacturer to that effect.

5.7.1.9

In the event that the Rating Committee shall determine that the ratings are not verified, the President of GAMA or his designee shall advise the manufacturer that the model in question is not verified and is no longer entitled to use the approved ratings.

5.7.1.9.1

A test on a second sample of the same model may be conducted within 90 days after notification, if requested by the manufacturer. Existing ratings for the model in question would remain in effect until notification of the results of the re-test.

5.7.1.9.2

If the GAMA representative and the manufacturer agree on the probability of failure at the time the first test is completed, the manufacturer may request that a second sample be tested prior to official notification. This would take the place of the test in 5.7.1.9.1 and no further testing would be permitted.

5.7.1.9.3

The test results of the second test shall be reviewed by the Rating Committee and the procedure shown in Section 5.7.1.4 through Section 5.7.1.9 followed except that no further testing is permitted.

5.7.2 REVIEW OF EXISTING RATINGS

At any time, the Rating Committee (whose decision shall be final), may determine that there is reason to believe that a product that has an I=B=R Rating is no longer entitled to such rating; based on information from a source other than an Indirect-Fired Water Heater manufacturer. In such cases, the Rating Committee may have such tests performed on a unit obtained by GAMA from the manufacturer's stock as the Rating Committee may deem proper with respect to the product. The provisions of this Section 5 shall be applicable. If the model or models meet 95% of the I=B=R ratings for Continuous Draw and First Draw plus no more than 110% of the Standby Loss, then GAMA shall bear the expense of all tests performed pursuant to this Section. In the event that the model or models do not meet 95% and 110% of the I=B=R ratings then the test expenses shall be borne by the manufacturer of the product.

5.7.3 COMPLAINT TEST PROCEDURE

In the event that a complaint is received from a manufacturer against a model manufactured by a Licensee, stating that a product having an I=B=R Rating may no longer be entitled to such rating, the Rating Committee shall review the information submitted under Section 5.7.3.1, to determine that the test was conducted correctly, the calculations were correct, and the results indicate that the unit will not achieve 95% of its First Hour, and Continuous Draw Rating, plus no more than 110% of its Standby Loss. If in the judgment of the Rating Committee there appears to be reasonable grounds for action, GAMA shall obtain a random sample of the model in question and shall test it at the manufacturer's laboratory or at some other laboratory selected by GAMA.

5.7.3.1 REQUIREMENTS OF COMPLAINT

A complaint must be supported by a test of the model conducted in accordance with this Rating Procedure and the complainant must file a copy of the test data and results with GAMA.

5.7.3.2 COST OF TEST

The cost of testing, including selection, shipping (if required), and final disposition of the unit, shall be borne completely by one of the two parties concerned. In the event the initial test results show the complaint to be justified, the manufacturer of the model in question shall pay the costs of this test and any re-test. In the event the initial test results do not bear out the complaint, the complainant shall pay these costs.

5.7.3.3 TEST REQUIREMENTS

- a) The GAMA representative shall personally select all test samples from the manufacturer's stock during an unannounced visit, or shall obtain them from a distributor.
- b) Tests shall be conducted according to section 5.4.3. If the calculated results from the tests are at least 95% of the listed I=B=R ratings for the First Hour and Continuous Flow rating plus not more than 110% of the Standby Loss for that model, the Ratings are verified.
- c) In the event that the Rating Committee shall determine that the specific model is verified, GAMA's President or his designee shall notify the manufacturer and the complainant to that effect.
- d) In the event that the Rating Committee shall determine that the specified model is not verified, GAMA's President or his designee shall advise the manufacturer and the complainant that the model in question is not verified and approved ratings for that model will be withdrawn by GAMA thirty days

hence and Section 5 (f) of the License shall be applicable, except as provided below.

A test on a second sample of the same model may be conducted by GAMA within twenty days after notification, if requested by the manufacturer. If the calculated form show the test results are at least 95% of the First Hour and Continuous Flow rating plus not more than 110% of the Standby Loss of the listed rating for that model, the Ratings are verified.

5.7.3.4 FEE DEPOSIT

GAMA reserves the right to require an advance deposit of test funds from either or both parties. If an advance deposit of test funds is requested from the complainant and the complainant fails to make such deposit, GAMA shall have no obligation to conduct tests in accordance with this Section 5.7.3.4 or otherwise respond to the complainant.

5.7.4 REFUSAL TO ALLOW CONFIRMATION TESTING

If a manufacturer refuses to provide a unit or otherwise precludes confirmation testing in accordance with Section 5.7.2 or Section 5.7.3, or fails to provide an advance deposit of test funds which may be required under Section 5.7.3.4, GAMA's President or his designee shall notify the manufacturer that the rating of the model is withdrawn, and Section 5 (f) of the License shall be applicable.

5.8 APPROVAL OF CHANGED PRODUCTS

5.8.1 RATING APPLICABLE ONLY TO TESTED PRODUCT

An approved I=B=R Rating applies only to the exact product which was tested and rated, and no I=B=R Rating shall be used for the product as changed unless and until an approved I=B=R Rating for the product as changed has been issued.

5.8.2 DEFINITION

A product shall be considered as changed if any of the data previously submitted with respect to the product, is in any way, inapplicable to the changed product.

5.8.3 NOTIFICATION BY MANUFACTURER OF CHANGE IN PRODUCT

5.8.3.1

A manufacturer of a unit for which an approved rating has been obtained who proposed to make any change in the product shall, prior to using any I=B=R Rating on such changed product or prior to introducing the changed product on the market with the same designation as the product being changed, send a written notice to GAMA Berkeley Heights stating (1) the changes proposed to be made, (2) the approximate date on which the changed product is expected to be introduced on the market, and (3) the requested rating for the product as changed.

5.8.3.2

If the requested rating shall be the same as the prior rating, and if the Rating Committee shall decide that the proposed change will not adversely affect the rating, the President or his designee shall give formal notification to that effect to the Licensee, which will constitute authorization for the use, for said product as so changed, of the I=B=R Rating and Catalog Data, therefore, approved for the product being changed.

5.8.3.3

If the Rating Committee shall decide that a proposed change may adversely affect the rating, or if the requested rating shall be different (either higher or lower) from the prior rating, GAMA's President or his designee shall request the manufacturer to furnish such data on a revised Form IWH-IBR-1. The Rating Committee may deem proper with respect to the product as changed and the determination of what rating, if any, shall be approved and shall be governed by the provisions of Section 5.4, and 5.5.

5.8.4 PROOF THAT PRODUCT HAS NOT CHANGED

5.8.4.1

A representative of GAMA may make unannounced visits to the manufacturer's facilities to verify such physical dimensions as may be required on each of the manufacturer's rated products. Such visits should take place at such times, as the Rating Committee should deem necessary.

5.8.4.2

Based on the dimensions recorded during the inspection, the Rating Committee shall determine whether a product has been changed. If the Rating Committee (whose judgment shall be final) shall deem a product to be a changed product for purposes of this Rating Procedure, such product shall no longer be an I=B=R Rated product until and unless a rating therefore is obtained pursuant to the provisions of this Section 5.8.

5.8.5 PUBLICATION OF I=B=R INDIRECT-FIRED WATER HEATER RATINGS

Each Licensee, by accepting a License, agrees that whenever any I=B=R Rating is granted, changed, or withdrawn, or a rated product is changed or deemed changed so that a previously issued rating is no longer applicable thereto, (i) such Licensee will give reasonable publicity of such event to the trade, (ii) GAMA is authorized at any time in its discretion to give notice of such event to the public, trade, members of GAMA and Licensees, and (iii) GAMA shall have no responsibility for any errors in giving such notice made in good faith.

CATALOG AND RATINGS FOR INDIRECT WATER HEATERS

Company Name - _____ *By -* _____ *Date -* _____

Indirect Water Heater Series Indirect Storage Potable water in tank
 Indirect Instantaneous Potable water in coil

Indirect Water Heater Model Number	Potable Water Volume Gal	Heat Source Water Volume Gal	Standby Heat Loss		Continuous Draw Rating Gal/hr	First Hour Rating Gal/hr	Minimum Heat Output Rate from Heat Source Btu/hr	Minimum Heat Source Flow Rate gpm
			Btu/hr	F/hr				

DO NOT WRITE IN SPACE BELOW

Approval of the above data as GAMA I=B=R Ratings and Catalog Data is hereby given. See Section 5.6.1 of the Rating Procedure for Indirect-Fired Water Heaters for "Minimum Data Required in Literature" and Section 5.6.3 for "Minimum Data to be Shown on Indirect-Fired Water Heater". Copy of rating plate, three copies of literature, and subsequent editions, must be submitted to the GAMA Berkeley Heights office as soon as possible.

GAMA _____ Date Approved: _____
 President

CATALOG AND RATINGS FOR INDIRECT-WATER HEATERS (Purchaser)

Company Name - _____ *By -* _____ *Date -* _____

Indirect Water Heater Series Indirect Storage Potable water in tank
 Indirect Instantaneous Potable water in coil

Indirect Water Heater Model Number	Potable Water Volume Gal	Heat Source Water Volume Gal	Standby Heat Loss		Continuous Draw Rating Gal/hr	First Hour Rating Gal/hr	Minimum Heat Output Rate from Heat Source Btu/hr	Minimum Heat Source Flow Rate gpm
			Btu/hr	F/hr				

The above ratings are identical to those approved for the undersigned Licensee for Indirect-Fired Water Heater Series Name or Number

Dimensional Drawing dated _____ . Log Sheets (Form IWH-ST-1, IWH-FD-1, and IWH-CD-1) dated _____ .
 Report Sheet (From IWH-R-1) dated _____ . Approval (Form IWH-IBR-1) for Licensee, dated _____ .
 Name of Licensee _____ By _____ Title _____

DO NOT WRITE IN SPACE BELOW

Approval of the above data as GAMA I=B=R Ratings and Catalog Data is hereby given. See Section 5.6.1 of the Rating Procedure for Indirect-Fired Water Heaters for "Minimum Data Required in Literature" and Section 5.6.3 for "Minimum Data to be Shown on Indirect-Fired Water Heater". Copy of rating plate, three copies of literature, and subsequent editions, must be submitted to the GAMA Berkeley Heights office as soon as possible.

GAMA _____ Date Approved: _____
 _____ President

CERTIFICATION BY LICENSEE AND PURCHASER OF IDENTICAL INDIRECT FIRED WATER HEATER

_____ (Licensee-Manufacturer)
(hereinafter referred to as the "Licensee"), a Licensee under the Rating Procedure for Indirect-Fired Water Heaters"
(hereinafter referred to as the "Procedure" and

_____ (Purchaser),
(hereinafter referred to as the "Purchaser"), hereby certify that the items to be resold by the Purchaser under its trade name and as listed on the enclosed form IWH-IBRP-1 are identical in every respect with the products manufactured by the Licensee, listed below, that were tested and approved under the Procedure.

**Trade Name and Designation of Product
of Licensee on which Rating was issued**

**Trade Name and Designation under which
Purchaser will resell item**

The Purchaser hereby agrees to use the I=B=R Ratings and the I=B=R Emblem that the Licensee has been authorized to use with the above products only on the terms and conditions set forth in the Procedure and in License granted to the Licensee.

Enclosed herewith are three copies of Form IWH-IBRP-1, and a dimensional drawing for each of the above items.

The Purchaser agrees that three copies of the Purchaser's literature showing approved I=B=R Ratings and the catalog data prescribed in "Minimum Data" Paragraphs of Section 5.6 of the Procedure, and one copy of the Purchaser's indirect water heater nameplate will be filed with "The Institute and with the Licensee as soon as possible after approval of the Ratings, and that three copies of all future editions of such literature will be filed with The Institute, and with the Licensee, from time to time as soon as possible after issuance.

The Licensee agrees to use its best efforts to see that the Purchaser does not use I=B=R Emblem except in strict accordance with the provisions of the License and the Standard.

(Name and address of Licensee-Manufacturer)

By: _____ Title: _____ Date: _____

(Name and address of Purchaser)

By: _____ Title: _____ Date: _____

LICENSE NO. IWH _____

**LICENSE FOR
INDIRECT-FIRED WATER HEATER**

LICENSEE: _____
(Company)

(Address)

LICENSOR: GAMA, INC.
2107 WILSON BOULEVARD, SUITE 600
ARLINGTON, VIRGINIA 22201

EFFECTIVE DATE: _____

LICENSE FOR INDIRECT-FIRED WATER HEATERS

LICENSE granted by GAMA, Inc., 2107 Wilson Boulevard, Arlington, Virginia 22201, herein termed the LICENSOR, to the undersigned manufacturer of indirect-fired water heaters, herein termed the LICENSEE, for the purpose of providing for the use of I=B=R Ratings and of the letters, "I=B=R", herein termed "I=B=R Emblem", in the form or forms as now or hereafter registered, together with "Minimum Data" described in the Rating Procedure for Indirect-Fired Water Heaters (IWH-RP-01), under specified conditions in connection with the advertising and sale of indirect-fired water heaters.

DEFINITIONS

1. (a) The term "LICENSEES", as used herein, means (i) manufacturers who produce or assemble complete indirect-fired water heaters and who sell complete indirect-fired water heaters and who have executed Licenses similar to this License.
- (b) The term "Procedure", as used herein, means the latest edition of the Rating Procedure for Indirect-Fired Water Heaters (IWH-RP-1), as from time to time amended as hereinafter provided.
- (c) The term "Emblem", as used herein, means the I=B=R Emblem.

REGISTRATION OF TRADEMARKS

2. (a) The LICENSOR has caused said I=B=R Emblem to be registered in its name in the United States Patent Office, Trademark No. 379,743 on July 23, 1940 and re-published April 20, 1948, and has caused it to be registered in its name with the Registrar of Trademarks of CANADA, Trademark No. N.S. 27892 on August 2, 1947, and the LICENSOR may cause said Emblem to be registered in such states and other countries it may determine.

GRANT OF LICENSE

3. The LICENSOR hereby grants to the LICENSEE, subject to all of the terms and provisions of this License and of the Procedure, the right and license to use ratings duly and properly obtained by the LICENSEE pursuant to the terms of the License and the Procedure and the right and license to use the I=B=R Emblem, as the case may be, in the manner provided in this License and the Procedure.

APPROVAL OF INDIRECT-FIRED WATER HEATER RATING PROCEDURE AND AMENDMENTS

4. (a) The LICENSEE hereby ratifies and approves, and agrees to be bound by all the provisions of the Procedure.
- (b) Amendments to the Procedure may be proposed by the LICENSOR or LICENSEE and any amendments so proposed shall be binding upon the parties hereto, and be deemed to be a part of the Procedure, if and when such amendments are approved by three-fourths of the LICENSEES either by mail ballot mailed to all LICENSEES or a meeting of LICENSEES called by the President of the LICENSOR on not less than ten (10) days' notice to all LICENSEES for the purpose of considering and acting upon such proposed amendments. Such mail ballot or notice, when sent to LICENSEES, shall be accompanied by a copy of the proposed amendments.

EMBLEM AND MINIMUM DATA ON INDIRECT-FIRED WATER HEATER AND IN TRADE LITERATURE

5. (a) The LICENSEE agrees that it will use the Emblem either as a part of the name plate or serial plate affixed to indirect-fired water heaters for which I=B=R Ratings have been approved, subject to all other conditions as specified in the License.
- (b) The LICENSEE agrees not to use the Emblem, or authorize it to be used, upon any indirect-fired water heater for which Ratings have not been approved by the LICENSOR.
- (c) The LICENSEE agrees to have permanently marked, in a clear and legible form upon each indirect-fired water heater to which the Emblem may be affixed, the Minimum Data so termed and more particularly specified in the Procedure, and also, to have its corporate or firm name permanently marked upon the name plate or serial plate which is affixed to each indirect-fired water heater.
- (d) The LICENSEE agrees that it will not use the Emblem or any I=B=R Rating in its trade literature except in conjunction with the Minimum Data specified in the Procedure.
- (e) The LICENSEE agrees that in such of its trade literature as contains statements or representations, expressed or implied, to the effect that the first hour rating, continuous draw rating, or standby loss rating of said indirect-fired water heater has been determined as prescribed in the Procedure, it will include the Minimum Data particularly described in the section of the Procedure pertaining to such Minimum Data in trade literature.
- (f) The LICENSEE agrees that whenever any I=B=R Rating is granted, changed or withdrawn, or a rated product is changed or deemed changed so that a previously issued rating is no longer applicable thereto, pursuant to any provision of the Procedure or of this License, (i) it will give reasonable publicity of such event to the trade, (ii) the LICENSOR is authorized at any time in its discretion to give notice of such event to the public, trade, companies that are members of the LICENSOR and LICENSEES, and (iii) the LICENSOR shall have no responsibility for any errors in giving such notice in good faith.

USE OF RATINGS AND EMBLEM BY PURCHASERS OF RATED PRODUCTS

6. Any purchaser of any indirect-fired water heater for which an I=B=R Rating has been duly and properly obtained by the LICENSEE pursuant to the terms of the Procedure and the terms of this License, shall have the right to use such a Rating and the Emblem in connection with the resale of the item so purchased, but only on the terms and conditions set forth in this License and the Procedure, including particularly Paragraph 5.3.2 of the Procedure. The LICENSEE agrees to use its best efforts to see that no such purchaser uses an I=B=R Rating of the Emblem, except in strict accordance with the foregoing.

CHANGES IN RATED PRODUCTS

7. As provided in Paragraph 5.8 of the Procedure, an approved I=B=R Rating applies only to the exact product which was tested and rated. No Rating shall be used for any product as changed unless and until an approved Rating for the product as changed has been issued as providing in paragraph 5-8-3 of the Procedure. The LICENSEE agrees that whenever it proposes to make any change in a rated product, it will, prior to using any I=B=R Rating on the changed product or prior to introducing the changed product on the market with the same designation as the product being changed, notify the LICENSOR in writing as required by Paragraph 5.8.3.1 of the Procedure. As provided in Paragraph 5.8.4 of the Procedure, a majority of the Indirect-Fired Water Heater Rating Committee provided for in the Procedure (or the President of The Licensor acting on their behalf) may at any time require the LICENSEE to furnish proof satisfactory to said Committee, as to the absence of changes in any rated product.

DESIGNATION OF RATED PRODUCTS

8. A specific designation applicable solely to the product for which an I=B=R Rating is requested must be assigned to the product. Neither that designation nor any confusingly similar designation shall be used for any other product whether I=B=R Rated or not. In the event that a product is changed as defined in Paragraph 5.8 of the Procedure and the Rating is affected by such change, a new designation must be assigned to the changed product.

DISCONTINUANCE OF SALE OF RATED PRODUCTS

9. The LICENSEE agrees that:
 - (a) whenever the LICENSEE shall discontinue regularly offering for sale any product for which an I=B=R Rating has been obtained, it will promptly notify the LICENSOR in writing to that effect, and
 - (b) between December 1 and January 1 of each year, the LICENSEE will advise GAMA in writing as to which of its previously rated products it was regularly offering for sale on January 1 of said year and as to which of its rated products it has discontinued regularly offering for sale during the twelve calendar months preceding January 1.

If, at any time, any proposed amendment to the Procedure is being submitted to LICENSEES for approval as provided in Paragraph 4(b) of this License, or at any time any proposed amendment to this License is being submitted to LICENSEES for approval as provided in Paragraph 14 of this License, the LICENSEE shall not be regularly manufacturing any product for which an I=B=R Rating has been issued pursuant to the Procedure, such LICENSEE shall not be entitled to participate in the voting on approval of such amendment and shall not be deemed a LICENSEE for purposes of determining whether the proposed amendment has been approved by the required number of LICENSEES. Such LICENSEE shall, however, in all other respects be entitled to the benefits and bound by the provisions of the Procedure and of this License and shall be bound by any amendments thereof even though not entitled to participate in the voting on the approval of such amendments. If a LICENSEE at any time shall not be regularly offering for sale at least one product for which an I=B=R Rating is in effect under the Procedure, the President of the LICENSOR shall send a notice to the LICENSEE by registered mail canceling and terminating the License and withdrawing all ratings of said LICENSEE. Nothing in this paragraph, however, shall relieve a LICENSEE or former LICENSEE of its obligation to conform to all the provisions of the Procedure and the License as regards the sale of any items on hand at the time of such of the provisions of the Procedure and the License shall be applicable as regards such items.

SETTLEMENT OF DISPUTES AS TO RATINGS

10. In the event of any dispute between the LICENSEE (or a prospective Licensee) and the Indirect-Fired Water Heater Rating Committee, (provided for in the Procedure,) as to whether tests have been made in accordance with the provisions of the Procedure or a proposed rating is proper under such tests and Procedure, such dispute shall be submitted for determination by either (a) a laboratory agreed upon in writing by the LICENSEE (or prospective Licensee) and the LICENSOR, or failing such agreement, by (b) a laboratory determined by a laboratory determined by the Licensor. In making such determination, the laboratory so agreed upon or selected shall conduct and base their determination upon retests in accordance with the procedures provided for the Procedure, and one or more members of the Indirect-Fired Water Heater Rating Committee or persons selected by them, and one or more representatives of the LICENSEE (or prospective Licensee), shall be entitled to be present and observe such retests if they so desire. The decision of the laboratory so agreed upon or selected shall be final and binding upon the LICENSOR and the LICENSEE (or prospective Licensee) and the fees and expenses of such laboratory and testing shall be borne by the LICENSEE (or prospective Licensee.)

FEES

11. The LICENSEE agrees that it will pay such fees as may, from time to time, be established by the LICENSOR (acting through its Executive Committee.) Such fees (i) may include, among others, testing and check testing fees, an initial fee for issuance of a License, annual or other periodic License, processing fees for each product or group of products for which ratings are granted, and initial, annual or other periodic fees for extension of ratings to purchasers who sell I=B=R Rated products under their own name, or any trade name or catalog designation different from the LICENSEE's and (ii) may be different for members and non-members of the LICENSOR or may be imposed on non-members and not on members. Differences under the foregoing clause (iii) shall be designed to reflect the fact that costs of membership in the LICENSOR (not paid by non-member Licensees) are devoted in part to the operation of the rating and licensing programs. The amount of the fees, the type of fees, the period which such fees cover, the product or group of products upon which the fees are based, and all other factors relevant to the determination of the fees, may be changed at any time at the discretion of the Executive Committee of the LICENSOR. No such change shall be effective until at least thirty (30) days written notice has been given the LICENSEE.

LIABILITY OF THE LICENSOR

11. The LICENSOR, its members, officers, employees, agents and representatives do not assume or accept any liability or responsibility of the LICENSEE, or to any other person, partnership, association, corporation or other entity, in any way based upon or arising out of (i) the approval of issuance of any ratings by the LICENSOR, (ii) any test made by or at the request of the LICENSOR, or (iii) the use of any facilities of the LICENSOR or of the LICENSEE, in connection with any such ratings, or any tests, and the LICENSEE hereby waives any and all claims based upon any such liability or responsibility as regards itself, and agrees to hold harmless the LICENSOR, its members, officers, employees, agents and representatives against any and all such liability or responsibility to, and claims made by or on behalf of, any other person, partnership, association, or corporation or other entity.

CANCELLATION

13. It is further agreed that if the Emblem or any I=B=R Rating should be used by the LICENSEE in any manner other than as herein and in the Procedure provided, or if any provision of this License or the Procedure be not observed by the LICENSEE, this License may be cancelled or terminated by the LICENSOR as applied to all indirect-fired water heaters sold by said LICENSEE and all ratings withdraw, in the following manner:
 - (a) The President of the LICENSOR shall send a notice to the LICENSEE by certified mail, specifying the violation in reasonable detail and stating this License shall terminate and all ratings be withdrawn on a date to be specified in such notice which shall not be less than thirty (30) days from the date thereof, unless the LICENSEE takes the action provided for in Subparagraph (b) below.
 - (b) This License shall terminate and all ratings shall be withdrawn on the date specified in the above-mentioned notice unless, prior to such date, the LICENSEE shall cease the violation specified in such notice, shall take all reasonable steps to correct such violation, and shall advise the LICENSOR in writing, by certified mail, in reasonable detail, as to the action taken by the LICENSEE in connection with the cessation and correction of such violation. The "reasonable steps" just referred to shall in case the violation consists of the publication and distribution of literature, which fails to contain correct ratings or the required Minimum Data, include comparable publication and distribution of corrected literature.

AMENDMENTS

14. Amendments to this License may be proposed by the LICENSOR or the LICENSEE and any amendment so proposed shall be binding upon the parties hereto, and be deemed to be a part of this License, if and when such amendment is approved by three-fourths of the LICENSEES either by mail ballot mailed to all LICENSEES or a meeting of LICENSEES called by the President of the LICENSOR, on not less than ten (10) days' notice to all LICENSEES, for the purpose of considering and acting upon such proposed amendment. Such mail ballot or notice, when sent to LICENSEES, shall be accompanied by a copy of the proposed amendment.

TERMINATION

15. This License may be terminated at any time by the LICENSEE upon thirty (30) days written notice to the LICENSOR. The cancellation or termination of any other of said similar Licenses shall not affect this License, which shall remain in full force and effect unless and until cancelled or terminated in the manner herein provided. This License may be terminated at any time by the LICENSOR, without cause, upon ninety (90) days written notice to the LICENSEE, provided that the LICENSOR at the same time gives a similar notice or termination to all other LICENSEES. In the event of cancellation or termination of this License, all future rights to the use of the Emblem and Ratings by the LICENSEE shall cease and be concluded on the effective date of such cancellation or termination.

LICENSE FOR INDIRECT-FIRED WATER HEATERS

DATED THIS _____ DAY OF _____ 20____

LICENSEE: _____

Address _____

By _____

Official Title _____

Signature _____

LICENSOR: GAMA, INC.

By _____ President

DATED APPROVED BY LICENSOR _____