

# ASSE 6010

## Exam Application

COURSE PROVIDER: \_\_\_\_\_

REQUESTED EXAM DATE: \_\_\_\_\_

Return application to CS@MEDGASLICENSE.COM with a copy of your course certificate.

Exam Cost: \$150 (after January 1, 2024 - \$200)

### COMPANY

COMPANY NAME: \_\_\_\_\_

MAILING ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_

### APPLICANT

NAME: \_\_\_\_\_

PHONE: \_\_\_\_\_

EMAIL: \_\_\_\_\_

CONTACT PERSON: \_\_\_\_\_ CONTACT EMAIL: \_\_\_\_\_

Contact person will receive future renewal information. If this is same as applicant, leave blank.

Paragraph 10-3.2.1 of the 2021 Edition of the ASSE 6010 Standard states "The candidates for the ASSE 6010 certification shall have a minimum of four (4) years of documented practical experience in the field of installation of plumbing or mechanical piping systems." NOTE: Please check with your state authority to make sure that your state will accept the MGA medical gas installer license.

Please list the documented experience for the applicant below:

### Employer, City & Phone Number

### Dates

Employer, City & Phone Number	Dates

- I have read the Information Sheet for MGA Exams and agree to abide by the rules listed.
- I have or will have completed the 32-hour course required to fulfill this certification.
- I understand that in some states, a plumbing license may be required in order to install medical gas.

**Please note:** In order to keep this license valid, a short course and test must be completed every 3-years when a new NFPA 99 edition is released. This course and test will cover changes made from the previous edition. It is the license holders responsibility to check their expiration date and schedule testing, although MGA will send an email to currently licensed individuals at least once when a new NFPA 99 edition is released. Brazing Continuity must also be maintained.

SIGNATURE OF APPLICANT: \_\_\_\_\_ DATE: \_\_\_\_\_

Medical Gas Licensing  
FAX: 678-498-2749  
PHONE: 770-783-3630

WEBSITE: www.medgaslicense.com  
MAIL: PO Box 820  
Villa Rica, GA 30180





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# MEDICAL GAS

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## MGA Exam and Licensing Information

### ASSE 6000 Passing Exam Grades:

ASSE 6005 – 70%  
ASSE 6010 – 70%  
ASSE 6020 – 70%  
ASSE 6030 – 85%  
ASSE 6035 – 85%  
ASSE 6040 – 70%  
ASSE 6050 – 85%  
ASSE 6060 – 70%

- To qualify for the **ASSE 6005** certification, the candidate must meet the requirements of the **ASSE 6005** Standard which are as follows:
  - Have a general interest in medical gas and vacuum systems and equipment.
  - Complete a 24-hour course taught by an ASSE 6050 certified instructor.
  - Successfully complete a written or computer exam.
  
- To qualify for **the ASSE 6010** certification, the candidate must meet the requirements of the **ASSE 6010** Standard which are as follows:
  - ASSE 6010 - 2021 Para. 10-3.2.1 – “The candidates for the ASSE 6010 certification shall have a minimum of four (4) years of documented practical experience in the field of installation of plumbing or mechanical piping systems.”
  - Complete a 32- hour course taught by an ASSE 6050 certified instructor.
  - Successfully complete a written or computer exam.
  - Successfully complete a practical brazing exam.



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- In addition, most states require that medical gas installers hold a journeyman or master plumbing license. If you are in the process of gaining your plumbing license, the ASSE 6010 certification can typically be added after you've gained your plumbing license even if this course is completed first.
- NOTE: The initial MGA brazing procedure specification will qualify brazers on ¼" to 3" tubing. The initial brazing procedure is required for all installers. If qualification for larger pipe sizes is required, MGA also has a brazing procedure specification for qualifying brazers on ¾" to 6" tubing at an additional cost.
- To qualify for the **ASSE 6020** certification, the candidate must meet the requirements of the **ASSE 6020** Standard which are as follows:
  - ASSE 6020 – 2021 Para. 20-4.1.1 – “The candidates for ASSE 6020 certification shall be employed by a governmental unit as a plumbing and/or mechanical inspector, or as an administrator of such inspectors, or be a person regularly involved in the design, inspection or verification of medical gas systems, or be a 6010 installer. Candidates shall have a minimum of two (2) years of documented practical experience or any combination of the above.”
  - Complete a 24-hour course taught by an ASSE 6050 certified instructor.
  - Successfully complete a written or computer exam.
- To qualify for the **ASSE 6030** certification, the candidate must meet the requirements of the **ASSE 6030** Standard which are as follows:
  - ASSE 6030 – 2021 Para. 30-3.2.1 – “The candidates for ASSE 6030 certification shall have a minimum of two (2) years of documented practical experience in the verification of medical gas systems.”
  - Complete a 32-hour course taught by an ASSE 6050 certified instructor.
  - Successfully complete a written or computer exam.
  - Successfully complete a practical exam.



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- To qualify for the **ASSE 6035** certification, the candidate must meet the requirements of the **ASSE 6035** Standard which are as follows:
  - ASSE 6035 – 2021 Para. 35-3.2.1 – “The candidates for ASSE 6035 certification shall have a minimum of two (2) years of documented practical experience in the verification and/or inspection of bulk medical gas/cryogenic fluid central supply systems.”
  - Complete a 32-hour course taught by an ASSE 6050 certified instructor OR hold an ASSE 6030 medical gas verifier’s credential and complete an additional minimum 16-hour training course covering bulk medical gas/cryogenic fluid supply systems, the FDA CGMPs, CGA M-1 and applicable sections of ASSE/IAPMO/ANSI Series 6000, NFPA 99 and NFPA 55.
  - Successfully complete a written or computer exam.
  - Successfully complete a practical exam.
  
- To qualify for the **ASSE 6040** certification, the candidate must meet the requirements of the **ASSE 6040** Standard which are as follows:
  - ASSE 6040 – 2021 Para. 40-3.2.1 – “The candidates for ASSE 6040 certification shall be employed or contracted by a health care facility or be actively engaged in working with medical gas systems and shall have one (1) year minimum experience in the maintenance of the medical gas and vacuum systems.”
  - Complete a 24-hour course taught by an ASSE 6050 certified instructor.
  - Successfully complete a written or computer exam.
  
- To qualify for the **ASSE 6050** certification, the candidate must meet the requirements of the **ASSE 6050** Standard which are as follows:
  - ASSE 6050 – 2021 Para. 50-3.2.1 – “The candidates for ASSE 6050 certification shall have a minimum of ten (10) years of documented experience in the installation of plumbing or mechanical piping systems, including a minimum of two (2) years of documented experience in the installation of medical gas and vacuum systems. Instructors shall have a minimum of two (2) years of



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documented practical teaching experience. Instructors shall possess a current medical gas systems installer certification in compliance with ASSE Standard 6010.”

- Complete a 40-hour course taught by an ASSE 6050 certified instructor.
  - Successfully complete a written or computer exam.
- To qualify for the **ASSE 6060** certification, the candidate must meet the requirements of the **ASSE 6060** Standard which are as follows:
    - ASSE 6060 – 2021 Para. 60-3.2.1 – “The candidates for ASSE 6060 certification shall have two (2) years of documented practical experience in the mechanical and plumbing systems industry and require practical knowledge of the design of medical gas and vacuum systems.”
    - Complete a 32-hour course taught by an ASSE 6050 certified instructor.
    - Successfully complete a written or computer exam.

### Failed Exams:

If you do not pass your exam on the first attempt, you may retest twice more with no additional exam fees. MGA will not give information on specific missed questions but will send you a list of NFPA 99 categories and the number of questions missed within each category.

Notes: All MGA certification expirations will occur on January 31<sup>st</sup> or July 31<sup>st</sup>.



# MEDICAL GAS

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### ASSE 6000 Exam Materials Allowed:

#### 6005

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000

#### 6010

- 2021 NFPA 99
- 2018 ASSE 6000

#### 6020

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000

#### 6030

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000
- 2018 CGA M-1

#### 6035

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000
- 2018 CGA M-1
- 2020 CGA P-18
- 2018 CGA E-10
- 2018 CGA G-4.1
- 21 CFR part 210, 211 and 280

#### 6040

- 2021 NFPA 99
- 2018 ASSE 6000

#### 6050

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 CGA M-1
- 2018 ASSE 6000

#### 6060

- 2021 NFPA 99
- 2020 NFPA 55
- 2018 ASSE 6000
- 2019 ASPE Design Guide, Vol 3
- 2018 FGI Guidelines for Hospitals

\*For recertification exams only, supplemental training literature is also allowed.



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### Appeals Process:

Appeals to any certification rule or procedure must be made in writing and sent via US mail, email or fax. A written response from MGA will be returned within 30 days.

### Inappropriate Representation:

If any MGA license holder misrepresents their license in any way, to include falsifying the scope of their certification or ability, the license can be revoked.

### Recertification:

ASSE 6000 requires a minimum 4-hour training course and short exam to subsequent editions of NFPA 99. This training must be conducted by an ASSE 6050 instructor.

MGA offers recertification exams for all MGA credentialed personnel to meet this requirement after proof of a 4-hour training course.

If an MGA certified license holder neglects to take the required course and test on two subsequent NFPA 99 editions, their license may be revoked, and a new initial certification course may be required.

### Braze Renewal:

Per NFPA 99, para. 5.1.10.11.11.7 "Performance qualifications of brazers shall remain in effect indefinitely, unless the brazer does not braze with the qualified procedure for a period exceeding 6 months or there is a specific reason to question the ability of the brazer."

All ASSE 6010 license holders must have a current ASSE 6010 certification and braze certification for the license to be valid.

MGA sends emails each December and July with braze renewal affidavits and payment forms, due back by January 31<sup>st</sup> and July 31<sup>st</sup>, respectively. If the installers 6010 and braze certifications are current, they will receive an updated license. There is no charge for the first braze renewal since it will fall within the first 6 months since initial certification.



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### MGA License Transfers:

MGA will accept license transfers from all recognized medical gas credentialing agencies on a case-by-case basis. To apply for a transfer, please send the appropriate transfer form with a copy of your most current license and a head shot photo.

If your license is not current, you will be required to renew any lapsed certifications through MGA before a new license is issued.

For all ASSE 6010 license transfers: If your initial braze qualification procedure was performed on 1 ½" tubing, you will be qualified for ¼" – 3" tubing under the initial MGA brazing procedure specification. If you also performed a test on 3" tubing, you will be qualified under the MGA larger pipe size brazing procedure specification for ¾" – 6" tubing.



# FOR ASSE 6010 Students

## Instructions for Brazing Coupons

- Please cut your 1-1/2" copper pipe into 5" and 7" pieces
- If possible, use roll stop couplings
- When you start to braze, be sure you have adequate nitrogen flow through the assembly being brazed. Allow the purge to continue for at least 2 minutes after you complete the braze
- When brazing the horizontal assemblies, make sure you mark the top dead center with a file so that I have no question where it is once I receive it
- When brazing the vertical assemblies, be sure to braze both sides of the coupling from the bottom up. You do not have to mark the vertical assemblies in any way
- Do not cut the assembly. I will cut them when I receive them
- Please send me (4) brazed horizontal assemblies
- Please send me (4) brazed vertical assemblies
- You will receive a brazer witness form. You are required to have (2) witnesses watch you braze and sign the form. One of the witnesses must be an officer of your company.
- Ship completed coupons with this checklist and your witness form to:

Barry Waller  
103 Hunter Industrial Dr.  
Villa Rica, GA 30180

**We have a brazing instructional video that we recommend you watch prior to attempting the braze: <https://www.youtube.com/watch?v=20yOrcpFMA8>.**

Once I receive your completed assemblies, I will do an initial inspection. If they pass the initial inspection, we will send them out for a final inspection. If they do not pass the initial inspection, we will contact you for additional assemblies. If you have any questions, please contact Barry at [brazing@medgaslicense.com](mailto:brazing@medgaslicense.com) or 770-317-3205.

# Medical Gas Accreditation

## Initial Record of Brazer Performance Qualification / Brazing Procedure Specification

Brazer Name: \_\_\_\_\_

Brazer ID: \_\_\_\_\_

(MGA in-office use only)

Employer: \_\_\_\_\_

Qualifying Agency: Medical Gas Accreditation    Using BPS No.: EMGS-TB/1    Date: 07/08/2016    Revision No.: 2

The above brazer is qualified for the following ranges:

Variable	Used in Qualification	Qualification
<b>Base Material (QB-402)</b>	<u>ASTM B88 (C12200) P No.: 107</u>	<u>P No.: 107</u>
Thickness	<u>0.060"</u>	<u>0.030" - 0.120"</u>
<b>Filler Metal (QB-403)</b>		
Specification No.	<u>SFA 5.8</u>	<u>SFA 5.8</u>
Class	<u>BCuP-5</u>	<u>See QB-432</u>
F-Number	<u>103</u>	<u>103</u>
<b>Diameter Range</b>	<u>1 1/2" nominal diameter</u>	<u>1/4" nominal thru 3" nominal</u>
<b>Brazing Process</b>	<u>Torch Brazing</u>	<u>Torch Brazing</u>
<b>Flow Position(s) (QB-407)</b>		
Method of applying filler metal	<u>Horizontal, Vertical Up</u>	<u>All Positions</u>
<b>Joint Types(s) (QB-408)</b>		
Joint Clearance	<u>0.002" - 0.010"</u>	<u>0.002" - 0.010"</u>
Length Overlap	<u>1.09</u>	<u>1.36" max</u>
Other	<u>Lap or Socket (Fitting)</u>	<u>Lap or Socket (Fitting)</u>
<b>Technique (QB-410)</b>		
Torch Brazing	<u>Manual Torch</u>	<u>Manual Torch</u>

Per Para. 5.1.10.11.11.5 of the 2021 edition of NFPA 99 and as the employer of the above-named medical gas brazer applicant, we certify the following:

- 1) This individual has completed the enclosed horizontal and vertical coupons without any physical assistance from any other individual.
- 2) The brazing process used to complete the enclosed horizontal and vertical coupons was per the outlined brazing procedure specification listed above in accordance with the requirements of section IX of the ASME code.
- 3) We, the employer, accept responsibility for the qualification procedures performed as listed above and acknowledge that the final brazed test results will be listed on the final record of brazer performance qualification after review, specific listing of test results, and signature of the independent certified welding inspector authorized by Medical Gas Accreditation for documentation.
- 4) Two individuals who are not the above listed brazer witnessed the brazing process. (See requirements below.) \*

\*Two witnesses must be present for the brazing process. One of these witnesses must be an officer of the above listed employer. The other witness can be an employee who is not the above listed brazer. Both of these witnesses must sign the following page.

Medical Gas Accreditation Brazing Instructions:

1. Tube shall be cut with a tubing cutter into (1) 7" and (1) 5" section and joined together with a roll stop coupling.
2. Deburr the interior edge of the tube with a clean deburring tool.
3. Clean the ends to be inserted into the coupling with an abrasive pad such as Scotchbrite. Do not use steel wool or sandcloth.
4. Insert the cleaned edges into the coupling. Do not beat the tube into the coupling.
5. Place the assembly on the jig and start the purge. Leave the nitrogen flowing for approximately two minutes after completing the braze.
6. Using a file or Sharpie, clearly mark the top dead center of the horizontal assembly. Cap the edges of the coupling when the braze is complete.
7. When brazing the vertical joints, both sides must be done in the upflow position. After completing the first side, rotate the entire assembly 180 degrees and complete the second side. Cap the edges of the coupling when the braze is complete.
8. Put your first initial and last name on each assembly.
9. Do not cut the assembly. Ship it complete with page 1 and 2 of this form.

Brazing witnesses print name and sign below. One witness should be a company officer. One witness may be an employee who is not the brazer.

Witness 1: \_\_\_\_\_  
(Print name)

Witness 1: \_\_\_\_\_  
(Sign name)

Witness 2: \_\_\_\_\_  
(Print name)

Witness 2: \_\_\_\_\_  
(Sign name)