



*“The Medical Gas Professionals”*

## **ASSE 6010 Medical Gas Systems Installer - Brazer Training Course**

The ASSE 6010 Medical Gas Systems Installer-Brazer Course consists of 32-hours of training covering all facets of ASSE Standard 6010 & NFPA 99-2021 as they relate to the proper Installation of Medical Gas Systems.

The Course will be taught by a certified ASSE 6050 Medical Gas Systems Instructor.

The Training is designed to teach the attendee the requirements to properly provide and install Medical Gas Systems IAW ASSE 6010 & NFPA 99-2021

The course is broken down into five (5) days with each of the first four days consisting of (8) hours of Classroom and the last day being used for Training on Brazing Techniques, a Final Brazing Exam and a 100 Question Multiple Choice Written Examination. Two 15-minute breaks are provided each day, one in the morning and the other in the afternoon along with a lunch break.

### **Day 1- Introduction to the Medical Gas System Installers Course NFPA 99-2021 (.5 HR)**

Chapter 1 Administration (Scope, Purpose, Application, Equivalency, Enforcement) – (.5 HR)

Chapter 3 Definitions (.5 HR)

Chapter 5.1 Category 1 Piped Gas & Vacuum Systems-

- Applicability, Category 1 Sources, Central Supply System Identification & Labeling (1 HR)
- Central Supply System Locations, Design & Construction, Ventilation & Storage (1 HR)
- Central Supply Systems, Manifolds for Gas Cylinders & Cryogenic Containers (1 HR)
- Emergency Oxygen Supply Connections & In Building Emergency Reserves (.5 HR)
- Medical Air Supply Systems (1 HR)
- Medical Vacuum Systems & Waste Anesthetic Gas Disposal Systems (1 HR)
- Instrument Air Supply Systems & Valves (1 HR)



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## **ASSE 6010 Medical Gas Systems Installer - Brazer Training Course**

### **Day 2-** NFPA 99-2021, Chapter 5.1 Category 1 Piped Gas & Vacuum Systems Continued

- Station Outlets/Inlets, Manufactured Assemblies, Surface Mounted Medical Gas Rails
- Pressure / Vacuum Indicators **(.5 HR)**
- Category 1 Warning Systems **(1 HR)**
- Category 1 Distribution- Piping Materials for Field Installed Positive Pressure Medical Gas Systems & Medical Surgical Vacuum / WAGD Systems **(1 HR)**
- Vacuum Tubing Marking, Fittings, Threaded Joints, Brazed Joints, Cutting Tube Ends, Cleaning Joints for Brazing, Brazing Dissimilar Metals, Nitrogen Purge **(1 HR)**
- Assembly & Heating Joints, Inspection of Brazed Joints, Welded Joints, Fittings, Prohibited Joints, Installation of Piping and Equipment, Branch Takeoffs, Qualification of Brazing Procedures and Brazing. **(1 HR)**
- Labeling & Identification, Performance Criteria & Testing –General **(1 HR)**
- Installer Performed Tests & Documenting Installer Performed Tests **(1 HR)**
- System Verification, ASSE 6010, ASSE Annex “A” Field Installation Procedures **(1 HR)**
- ASSE Annex “M” Installer Performed Testing Record **(.5 HR)**

### **Day 3-** NFPA 99-2021 Chapter 5.2 Category 2 **(1 HR)**

#### Chapter 5.3 Category 3 Piped Gas & Vacuum Systems-

- Applicability, Category 3 Sources-Identification & Labeling, Locations for Medical Gas
- Supply Systems, Indoor & Outdoor Locations, Ventilation **(1 HR)**
- Locations for Air Compressors & Vacuum Pumps, Medical Gas Supply Systems, Category 3 Gas Powered Supply Device Systems, Category 3 Vacuum Sources **(1 HR)**



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## **ASSE 6010 Medical Gas Systems Installer - Brazer Training Course**

### **Day 3-** NFPA 99-2021, Chapter 5.3 Category 3 Continued-

- Category 3 Valves, Station and Service Inlets and Outlets, Category 3 Warning Systems, Category 3 Distribution, Installation of Category 3 Piping and Equipment **(1 HR)**
- Qualifications of Brazing Procedures and Brazing, Labeling & Identification, Performance Criteria & Testing, System Verification **(1.5 HR)**
- Chapter 14 Hyperbaric Facilities **(1 HR)**
- Chapter 15 Dental Gas and Vacuum Systems **(1.5 HRS)**

### **Day 4-** NFPA 99-2021, Chapter 15 Continued-

- Chapter 15 Dental Gas and Vacuum Systems **(5.5 HRS)**
- ASSE 6010 & NFPA 99-2021 Review **(2.5 HR)**

### **Day 5-** Preparation for Written Exam **(.5 HR)**

\*Written Exam **(2 HR)**

Brazing Practice-Proper Cutting, Deburring, Cleaning & Inspection, Establish a Nitrogen Purge, Verify Purge Effectiveness prior to Brazing (Oxygen Analyzer) **(3.5 HRS)**

\*Brazing Examination **(2 HR)**

The medical gas installer-brazer examination consists of two portions: a closed book multiple-choice one hundred (125) question written examination and a brazing examination.

Individuals who successfully complete this course will be certified through VPS, Inc as an ASSE/6010 medical gas system installer and ASME IX qualified brazer.

\*Prerequisite- Applicant's MUST have a minimum of four (4) years documented practical experience in the installation of piping systems.

**Corporate Office 4518 Clements Rd. Lakeland Florida 33811 Phone: 863-646-7555 · Fax 863-646-2999**

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## **ASSE 6010 Medical Gas Systems Installer - Brazer Training Course Checklist**

The Attendee's of the ASSE 6010 Medical Gas Installers – Brazers Training Course must provide the following:

1. Photo Identification
2. Ink Pen's, Pencil's, and Highlighter's
3. Notebook paper for taking notes
4. 15' of 1-1/2" ASTM B819 Hard Drawn Seamless Copper Tubing Type "L"
5. 15 each 1-1/2" Copper Couplings w/stops
6. 1lb of BcuP Series Brazing Filler Metal 5%-15%
7. Clean Sharp Deburring Tool
8. Clean Sharp Tubing Cutter (Capable of cutting 1-1/2" Copper)
9. Clean Stainless-Steel Wire Brush (1-1/2") for Cleaning Fittings
10. Clean Non-Shedding Abrasive Pads (Scotch Brite)
11. Clean Lint Free White Cloth's/Rags
12. Nitrogen Regulator w/Flow Meter
13. 15' Hose Assembly (for Nitrogen Purging)
14. Acetylene (enough for 4 hrs./brazer with #32 Turbo Torch Tip)
15. Acetylene Regulator w/Hose Assembly (Turbo Torch Kit)
16. Long Sleeve Shirt, Long Pants, Safety Glasses, Work Gloves (Capable of protecting Hands During Brazing Procedures), and Work Boots for the Brazing Training/Testing

The Attendee's of the ASSE 6010 Medical Gas Installers – Brazers Training Course must be able to Read, Speak & Understand the English Language.

The Attendee's will be provided an NFPA 99-2021 code book (\$120.00 value) as part of the Course. The ASSE Series 6000 Professional Qualification Standard for Medical Gas Systems Personnel is not provided as part of this course; however, it can be provided for an additional charge.



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## Application for ASSE 6010 Medical Gas Systems Installer - Brazer Training Course

First & Last Name: \_\_\_\_\_ S.S. #: (last six) XXX- -

Address: \_\_\_\_\_ Residence Phone: ( ) -

City, State: \_\_\_\_\_ Zip: \_\_\_\_\_

Email: \_\_\_\_\_ Work Phone: ( ) - Cellular Phone: ( ) -

I have a minimum four (4) years experience in Installation of Piping Systems:                      Yes                       No

List your present or most recent employer first:

Employer	Address	From	To

\*Please provide phone #(s) of previous employers for verification of work experience.

\*Attendee’s must be paid in full to be considered enrolled in the course

The price of attendance is:

\$1750.00 per attendee for classes with less than 10 attendees

\$1500.00 per attendee for class sizes over 10.

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