

FIRE DEPARTMENT • CITY OF NEW YORK



**NOTICE OF EXAM FOR THE
CERTIFICATE OF QUALIFICATION EXAMINATION**

Q-01

**Refrigerating System Operating
Engineer (RSOE)**

Important Curriculum and Exam Change – Effective July 1, 2026

Starting July 1, 2026, the RSOE exam will be administered in a new exam format based on the updated curriculum.

- ❖ **Applicants testing on or before June 30, 2026, will take the exam in its current format and based on the current curriculum.**
- ❖ **To allow for two possible attempts under the current exam format, applicants must make their first attempt by April 1, 2026.**
- ❖ **Based on appointment availability, we expect applicants who test by April 1 will have at least one more opportunity to retake the exam before the final administration of the current format on June 30, 2026.**
- ❖ **The FDNY will continue to accept prior school certificates after the new curriculum takes effect in July 2026.**
- ❖ **Refresher courses based on the new curriculum are not required after July 1 but are strongly recommended.**

Exam Specific Information For Q-01 Certificate of Qualification

An appointment is required to take the Q-01 Certificate of Qualification Exam (including the first part- Z-51 exam and the second part-Z-52 practical exam).

Application and payment must be completed online prior to scheduling an appointment. **You must have** an FDNY COF application ID before scheduling the appointment.

Instructions for online application and payment can be found here:

<http://www1.nyc.gov/assets/fdny/downloads/pdf/business/fdny-business-cof-individuals-short.pdf>

Create an Account and Log in to:

<https://fires.fdnyccloud.org/CitizenAccess/SAML/NYCIDLogin.aspx>

To Schedule an appointment to take the Z-51 exam (the first part of the Q-01 Certificate of Qualification):

<https://www1.nyc.gov/site/fdny/business/all-certifications/cof-online-scheduler.page>

Quick Reference Guide for Q-01 online application

<https://www1.nyc.gov/assets/fdny/downloads/pdf/business/fdny-business-cof-individuals-short-q01.pdf>

REQUIREMENTS FOR CERTIFICATE OF FITNESS/QUALIFICATION APPLICATION

General requirements:

Review of the General Notice of Exam:

<https://www1.nyc.gov/assets/fdny/downloads/pdf/business/general-notice-of-exam-cof.pdf>

Special requirements for Q-01 Certificate of Qualification:

Candidates **will not** be allowed to take the exam **without** the requirements listed below.

It is your responsibility to ensure you are qualified to take the Z-51 exam before paying online and scheduling the appointment.

When you **apply for the Z-51 exam online**, you **MUST** upload the copies of all the following required materials listed below. FDNY also recommends that you should bring the original document(s) with you when you take the exam.

1. A high school diploma or GED.

Note: Degree issued from outside USA or not in English shall be evaluated by an independent evaluation service accepted by NYC Department of Citywide Administrative Services.

<http://www1.nyc.gov/assets/fdny/downloads/pdf/business/foreign-education-evaluation.pdf>

2. A completed the Z-51 application form and attached the required documents listed on the form. Z51 application form:
<http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-z51-application.pdf>
3. **Universal Technician Certification:** The regulations of the U.S. Environmental Protection Agency require an individual performing the duties of a refrigerating system operating engineer to possess Universal Technician Certification ("UTC") (40 CFR Part 82, Subpart F). Therefore, at the time you apply for the exam you must present evidence of UTC.
4. One of the following requirements:
 - A current High Pressure Boiler Operating Engineer License issued by the New York City Department of Buildings; or a current Marine Engineer certificate issued by the United States Coast Guard; or a current Professional Engineer's License issued by one of the fifty states (USA).
OR
 - Refrigeration Operating Engineer training course from one of the FDNY certified schools or organizations, of at least 200 hours duration, at least 25 of which shall have been in the field or shop work.
<http://www1.nyc.gov/assets/fdny/downloads/pdf/business/accreditation-refrigeration-requirements.pdf>
OR
 - At least 1 year of practical experience, in the preceding 3 years,
 - (a) working in a building or plant with refrigerating or air conditioning equipment that, at a minimum, has an individual system containing over 50 pounds of refrigerant, or a prime mover or compressor of more than 50 horsepower, or an aggregate of individual systems of more than 15 horsepower each, with a total of more than 100 horsepower: **OR**
 - (b) engaged in the servicing and repair of refrigerating or air conditioning equipment rated at 5 horsepower or over; or containing 20 pounds or more of refrigerant; **OR**
 - (c) A combination practical experience of (a) and (b) above that is satisfactory to the Fire Department

Application fee (Cash is NO LONGER ACCEPTED):

Pay the **\$60** application fee for Z-51 exam online. After passing Z-51 exam, pay **\$225** practical fee for Z-52 exam. All payment must be paid online by one of the following methods:

- Credit card (*American Express, Discover, MasterCard, or Visa*)
- Debit card (*MasterCard or Visa*)
- In person: Personal or company check or money order (*made payable to the New York City Fire Department*)

A convenience fee of 2% will be applied to all credit card payments.

For fee waivers submit: (***Only government employees who will use their COF for their work-related responsibilities are eligible for fee waivers.***)

- A letter requesting fee waiver on the Agency's official letterhead stating applicant full name, exam type and address of premises; **AND**
- Copy of identification card issued by the agency

PROCEDURE OF APPLICATION

(1) Computer exam (Z-51)

➤ **Applying online and scheduling the Z-51 computer exam:**

You must complete a Certificate of Fitness (COF) application (<https://www1.nyc.gov/site/fdny/business/all-certifications/certificates-of-fitness.page>) and pay online for the Z-51 exam before scheduling an appointment. **Without showing an online COF application ID, you cannot take the exam, and you will have to reschedule.**

Appointments are between 1:10 pm -2:00 pm, five days a week (M-Thursday) except for legal holidays.

It is your responsibility to ensure you are qualified to take the Z-51 exam before paying online.

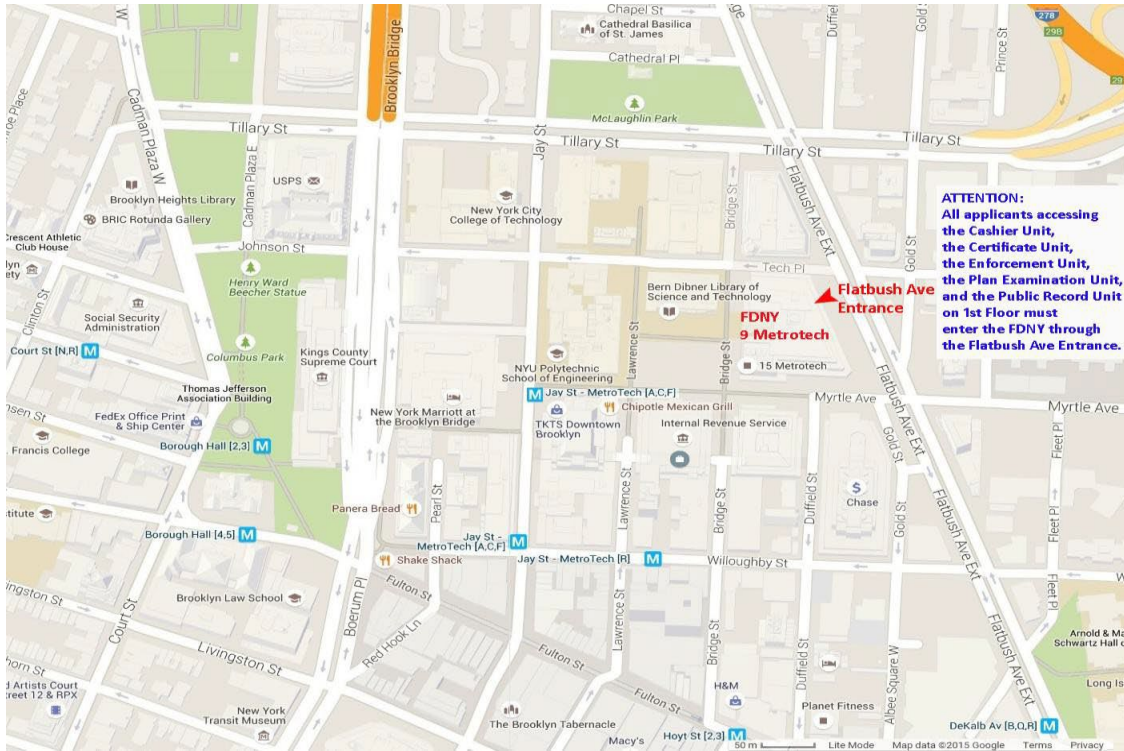
To Schedule an appointment to take the Z-51 exam (the first part of the Q-01 Certificate of Qualification):

<https://www1.nyc.gov/site/fdny/business/all-certifications/cof-online-scheduler.page>

➤ **Taking the Z-51 computer exam:**

Bring two forms of identification; at least one form of identification must be government issued photo identification, such as a State-issued Drivers' License or Non-Driver's License or a passport and the schedule confirmation email and visit the following exam site.

Exam site: **FDNY Headquarters, 9 MetroTech Center, Brooklyn, NY. Enter through the Flatbush Avenue entrance (between Myrtle Avenue and Tech Place).**



➤ **Computer exam - General information**

The **Z-51** exam consists of **110** multiple-choice questions including additional questions regarding Building Operation, Maintenance and Recordkeeping Training Course Manual (see the bibliography of study materials listed below). It is a time-limit exam. Based on the number of questions, you will have 193 minutes to complete the test. A passing score of at least 70% is required.

Special material provided during the exam: A reference material will be provided during the written exam for a basic unit conversion sheet and a sample of MSDS will be provided during the written exam.

Please always check for the latest revised bibliography of study materials booklet at FDNY website before you take the exam.

<http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-q01-noe-study-materials.pdf>

I. New Exam Format

Please be advised that the Fire Department intends to administer the new exam format starting **July 1, 2026**.

Listed below are items that you should expect with the updated exam:

- A. The written exam will be titled, “Refrigerating System Operating Engineer Exam Part I” (RSOE Fundamentals) and the simulator portion of the exam to be titled, “Refrigerating System Operating Engineer Exam Part II” (RSOE Practical).

- B. The current exam has **17 categories** of questions. We anticipate that the number, The revised exam will streamline and consolidate the content into 10 categories, including 5 new categories. The revised exam will **streamline** and consolidate the content into **10 categories**, including **5 new categories**. The table below details how the existing categories have been reorganized and presents the new structure.

NEW CATEGORIES as of July 1, 2026

1. Math and Theory (11, 12 and 15)
2. Plant Operations (2,6)
3. Machine Room Safety
4. Fire and Mechanical Code Refrigerating System Requirements (3)
5. FDNY Building Operation, Maintenance, and Recordkeeping (3,16,17)
6. Chiller Specific Operating and Maintenance Manual
7. Practical Applications Cases
8. Cooling tower Operations & Requirements.
9. Refrigerants (5)
10. Component Fundamentals and Applications (1,4,7,8,9,10,13,14)

- C. Where specific chapters are listed, you can limit your focus only on the cited chapter.

II. Important Curriculum and Exam Change – Effective July 1, 2026

Starting July 1, 2026, the RSOE exam will be administered in a new exam format based on the updated curriculum described above.

- ❖ **Applicants testing on or before June 30, 2026**, will take the exam in its **current format** and based on the **current curriculum**.
- ❖ To allow for **two possible attempts** under the current exam format, applicants must make their **first attempt by April 1, 2026**.
- ❖ Based on appointment availability, we expect applicants who test by April 1 will have at least one more opportunity to retake the exam before the **final administration of the current format on June 30, 2026**.

Eligibility

The FDNY will continue to accept prior school certificates after the new curriculum takes effect in **July 2026**.

Refresher courses based on the new curriculum are **not required** after July 1 but are **strongly recommended**.

Applicants are highly recommended to bring a battery-operated calculator that does not have a word processing function.

BIBLIOGRAPHY FOR STUDY MATERIALS

Starting from 7/1/2026, the computer exam will start to include questions from this material.

1. Refrigeration and Air Conditioning Technology, 10TH Edition, Silberstein, Obrzut, Whitman, Johnson and Tomczyk.
2. HVAC Water Chillers and Cooling Towers: Fundamentals, Applications, and Operations, 2nd Edition, Herbert W. Stanford III: Chapters 1, 3, 4, 7, 9, 10, 11, 12, 13, 14, and 15.
3. Exam Reference Guide
 - A. Conversions and Abbreviations
 - B. Safety Data Sheet for R513A
 - C. Steam table
 - D. Piping pressure drop table
 - E. Refrigerant PT Chart
4. Hydraulic Shock Safety Bulletin, Key Lessons for Preventing Hydraulic Shock in Industrial Refrigeration Systems, Anhydrous Ammonia Release at Millard Refrigerated Services, Inc. Dated January 2015, US Chemical Safety and Hazard Investigation Board
5. YORK Installation, Operation and Maintenance Manual, Water-Cooled Liquid Chillers Hermetic Scroll issue date November 23, 2020, YCWL0056 - 0198 Water-cooled Liquid Chillers Style A (60 HZ) 50 - 200 tons, 410A refrigerant, Pages 12-17, and 39.
6. 2022 NYC Fire Code Section 606 (Mechanical refrigeration operation and maintenance requirements)
7. FDNY Rule 606-01 (Procedures for removing accumulated oils in ammonia refrigerating systems)
8. FDNY Building Operation, Maintenance and Recordkeeping Training Course Manual <http://www1.nyc.gov/assets/fdny/downloads/pdf/business/cof-q01-bomr.pdf>
9. FDNY Study Material, A2L Refrigerant and Compliance Requirement for RSOE Exam <https://www.nyc.gov/assets/fdny/downloads/pdf/business/cof-z51-noe-study-materials.pdf>
10. 2022 NYC Mechanical Code Chapter 11 (Refrigeration)
11. ASHRAE 15 of 2022, (Safety Standard for Refrigerating Systems)
12. NYC Health Code, Local Law 77 of 2015 (Title 28, Chapter 3, Article 317, Cooling Towers)
13. NYC Health Department Rules, Chapter 8, Cooling Towers

➤ **After the computer exam:**

1. **Passes the computer exam:**

The applicant will receive a temporary Z-52 letter stating that the applicant passed the computer exam.

2. **Fail the computer exam:**

Applicants who fail the exam will receive a failure report. To retake the exam applicants will need to make online appointments and submit a new application and payment.

(2) Practical exam (Z-52 Exam)

➤ **Scheduling the computer exam:**

Practical exams are administered Monday through Friday (except legal holidays) by **appointment only**:

Step 1. You must complete the Z-52 application and pay \$225 online before scheduling an appointment for the practical exam. Visit:

<https://fires.fdnyccloud.org/CitizenAccess/SAML/NYCIDLogin.aspx> , use your NYC Account ID to login. Instruction can be found on:

<https://www1.nyc.gov/site/fdny/business/all-certifications/certificates-of-fitness.page>

Step 2. You must scan and upload the Z-52 passing letter while filling in the Z-52 online application.

Step 3. After completing the online application and payment, you will receive an email confirmation. The email title will give you an FDNY COF application ID, the format is "2xxx-COF-xxxxxxx-APP".

Step 4. Email both Claudine.McClintock@fdny.nyc.gov and Kimberly.Gerardino@fdny.nyc.gov with email subject title "schedule Z-52 practical exam". In the email, you must list:

(1) Your FDNY COF application ID; (2) Three preferred exam dates and morning or afternoon; (3) Your contact phone number.

The FDNY staff will contact you to confirm the exam date and time and send you a confirmation email.

Step 5. Be on time for your appointment! The fee (\$225) is NOT REFUNDABLE. Bring the Z-52 letter, your confirmation email (with the appointment date and your FDNY COF application ID information)

Note:

- No exam can be scheduled if the Z-52 passing letter is expired. If you fail Z-52 three times or this letter expires, you need to retake the 1st part, Z-51, exam.
- Applicants will be permitted to take the practical exam up to (3) times with \$225 payment for each practical exam. **Any no-show will be counted as one failure and must repay the \$225 payment to schedule another practical exam.**

➤ **To reschedule the practical exam (must be made 14 days prior to the scheduled exam date):**

Once you have scheduled the exam, the exam cannot be canceled and may only be rescheduled **once** when the following conditions are met:

All rescheduling requests must be submitted via email to both Claudine.McClintock@fdny.nyc.gov and Kimberly.Gerardino@fdny.nyc.gov at least 14 calendar days prior to the scheduled exam date with email's subject: "**Z-52 practical exam reschedule request _____(applicant's name)**"

To expedite the reschedule, be sure to provide the following in the body of the email:

Full name Last Name, First Name.

- o Last 4 digits of Social Security Number.
- o Practical Exam date.
- o Proposed rescheduling dates (must be after the original exam date).

Only one rescheduling per person is allowed. Any request less than 14 days prior to the test date will not be accepted.

Once your request is approved or refused, you will be contacted via email in 3 working days. In case you have not heard from us in 5 working days, please check your email spam folder or call 718-999-0649. The new exam date will be provided in the email. You **MUST** bring the confirmation email on your newly rescheduled exam date.

➤ **Emergency reschedule request (must be made at least 3 days prior):**

If you are unable to attend the test center on the day of your test because of illness or Family emergency, The FDNY may agree to reschedule the exam when the following conditions are met:

You must submit the official illness or family emergency document(s) at least 3 calendar days prior to the scheduled date of the test. The documents should be submitted electronically to both Claudine.McClintock@fdny.nyc.gov and Kimberly.Gerardino@fdny.nyc.gov, with email's subject: "**Z-52 practical exam EMERGENCY reschedule request _____(applicant's name)**" at least 3 calendar days prior to the scheduled exam date.

Acceptance of evidence is at FDNY's discretion. No test may be rescheduled more than once for medical or family reasons.

Once your request is approved or refused, you will be contacted via email in 1 working day.

Any request less than 3 days prior to the test date may need additional official documents to indicate that it is impossible to be physically at the test center and impossible to request 3 days prior to the exam date. This will need a special reviewing process and acceptance of evidence is at FDNY's discretion.

➤ **Practical exam - General information**

Starting on 03/01/2025, a updated practical simulator exam has been provided.

The exam includes two systems: Centrifugal and Reciprocating. Questions on the new exam in each system are divided into six categories. Those categories are Operations, Validation of Repairs or Maintenance, Refrigerant Handling, Troubleshooting, Multi-step Questions, and Scenario Questions.

Definition of each category:

1. Operations, which include, but are not limited to, questions around the following topics at a comprehension-level of learning:
 - a. Component Identification.
 - b. Component Function.
 - c. Reading Gauges.
 - d. Calculations of Temperature/Pressure Differences.
 - e. Use of Pressure/Temperature Charts and Conversions

You need to know the locations and functions of each component.

2. Validation of Repairs/Maintenance, which includes, but is not limited to, questions around the following topics at a comprehension-level of learning:
 - a. Normal maintenance and repair problems.
 - b. Validation of repairs; c. Start-up procedures

3. Refrigerant Handling, which includes, but is not limited to, questions around the following topics at a comprehension level of learning:
 - a. Recovery.
 - b. Charging.

4. Troubleshooting/Diagnosis of Issues, which includes, but is not limited to, questions around the topics of troubleshooting and diagnosing problems with system operations.

You need to interpret the readings and know which reference document is required for answering the questions.

5. Multi-step Questions
 - a. These questions include multiple sub-questions, but do not rise to the level of complexity of a scenario.
 - b. They are a combination of comprehension-level and application-level learning and represent areas of content covered in all the categories above.

Only one multi-step question in each system. A multi-step question may have a maximum of 6 follow-up questions.

6. Scenarios
 - a. These questions are at an application level of learning and will, by their cumulative nature, include portions of the question/scenario that connect to the other categories
 - b. For example, the end-to-end recovery procedure for the reciprocating unit would go in this category, but a single question related to comprehending that process would be assigned to troubleshooting category.

Only one scenario question in each system. A scenario question may have a maximum of 16 follow-up questions.

The instruction manual and free tutorial video are available on the FDNY website. (Scroll down to find the video link and other related materials.)

<https://www1.nyc.gov/site/fdny/business/all-certifications/certificates-of-qualification.page>

The tutorial video could also be viewed via YouTube channel:

<https://www.youtube.com/watch?v=8kQDgDFrCwc>

You must read the instruction manual and watch the tutorial video to prepare for the practical exam.

Applicants must attain at least 70% on the practical exam in order to receive a COQ.

➤ **The consequence of failing the practical exam**

Applicants who fail the exam will receive a failure report. To retake the exam applicants will need to make another payment and appointment with the Z-52 letter and submit a new payment (\$225).

Applicants will be permitted to take the practical exam up to (3) times with \$225 payment for each practical exam. If the applicants do not pass the examination after the 3rd attempt, the applicants will be required to retake the computer exam (Z-51). To retake the exam applicants will need to schedule the computer exam and pay the application fee prior to taking the exam.

➤ **Passes the practical exam:**

The applicant will receive a temporary Q-99 letter stating that the applicant passed the practical exam. The applicant needs to present the following documents at 9 Metrotech Center, Brooklyn, to receive the Certificate of Qualification card (Q-01):

1. The temporary Q-99 letter stating the applicant passed
2. A copy of the FDNY permit for the refrigerating system
(Note: If the FDNY permit is not available due to lack of COQ holder's supervision, provide a copy of the violation.)
3. A recommendation letter from the current work location. The recommendation letter must be on business letterhead and signed by an appropriate officer of the employer and provide the following information:
 - full name of the applicant.
 - premises address, building designation and location of system to be supervised by the certificate holder (for example: 500 East 150th Street, B building, basement, east wing, Room B101).
 - name of the manufacturer of the refrigerating system.
 - type and number of pounds of refrigerant in the system.
 - horsepower rating of the refrigerating system.
 - date for installation of the refrigerating system.

The sample recommendation letter is provided at the appendix C of this document.

REQUIREMENTS FOR ADDITIONAL WORK LOCATION

Certificate of Qualification holders seeking to register more than one work location must present the following documents from the employer for the additional work location. A Certificate of Qualification shall not be registered for more than one work location for the same day and at the same time if personal supervision is required at more than one such location. \$60 application fee will be charged for the additional Certificate of Qualification card.

***Note: A Certificate of Qualification must not be registered for more than one work location for the same day and time if personal supervision is required** at more than one such location.

The applicant must submit the following required documents for EACH WORK LOCATION:

- (1) Current Certificate of Qualification card
- (2) A copy of the FDNY permit for EACH refrigerating system
- (3) A recommendation letter from **EACH work location** (including the current location). The recommendation letter must be on business letterhead and signed by an appropriate officer of the employer and provide the following information:
 - full name of the applicant.
 - premises address, building designation and location of system to be supervised by the certificate holder (for example: 500 East 150th Street, B building, basement, east wing, Room B101).
 - name of the manufacturer of the refrigerating system.
 - type and number of pounds of refrigerant in the system.
 - horsepower rating of the refrigerating system.
 - date for installation of the refrigerating system.
 - the days and specific hours worked
 - Whether or not the certificate holder would be providing *personal* or *general supervision* of the equipment in accordance with the Fire Code Requirements (refer to appendix B of this document)

The sample recommendation letter is provided at the appendix C of this document.

2022 FIRE CODE ENACTED

The amended New York City Fire Code, to be known as the 2022 Fire Code, takes effect on April 15, 2022. **It may not have been updated in this study material and the exam will be mainly based on this booklet, not the 2022 Fire Code. However, as the Certificate of Fitness holder, it is your responsibility to become familiar with the applicable sections of the new 2022 Fire Code.**

Design and installation provisions.

The design and installation provisions of the 2022 Fire Code shall apply to:

- Facilities established and conditions arising on or after 04/15/2022.
- Facilities and conditions do not lawfully exist prior to 04/15/2022.

The facilities and conditions lawfully existing prior to the 04/15/2022 can be continued in compliance with the requirements of the former Fire Code/Fire Rule except as otherwise provided in the New Fire Code 102.5.

Operational and maintenance provisions.

The operational and maintenance provisions of the 2022 Fire Code, including permit and certification requirements, shall apply to all facilities, operations, conditions, uses and occupancies, regardless of when they were established or arose.

Whenever this code is amended or a rule is promulgated to require a permit or certificate for a facility, operation, condition, use or occupancy, and no permit or certificate was previously required therefor pursuant to this code or the rules, such facility, operation, condition, use or occupancy may be continued without such permit or certificate until 04/15/2023, except as may otherwise be provided by such amendment or rule.

The 2022 Fire Code can be obtained via the following website:

<http://www1.nyc.gov/site/fdny/codes/fire-code/fire-code.page>

The 2014/2022 New York City Fire Code Cross-Reference Table can be referred to the following website:

<http://www1.nyc.gov/assets/fdny/downloads/pdf/codes/fire-code-cross-reference.pdf>

RENEWAL REQUIREMENTS

General renewal requirements:

Review of the General Notice of Exam:

<https://www1.nyc.gov/assets/fdny/downloads/pdf/business/general-notice-of-exam-cof.pdf>

Special renewal requirements. Q-01 Certificate of Qualification:

New!!

Starting **July 1, 2025**, all Q-01/Q-99 holders applying for renewal must submit evidence of having completed an A2L training course provided by an FDNY Approved Refrigeration School (refer to Notice of Exam for detail).

Holders who have taken a FDNY Computer-Based Test (CBT) after **January 1, 2025**, are ***exempt*** from this renewal requirement.

HOURS AND TOPICS OF INSTRUCTION.

- Training must be a minimum of seven (7) hours of *live* (in person or virtual) instruction.
- Course Instruction must include Fire Code, Building Code, and rule requirements associated with A2L Refrigerant, safety and flammable refrigerant provided by FDNY.

COURSE COMPLETION.

- Students must attend all seven (7) hours of training to be eligible to take the training course's examination.
- Students will only be allowed two (2) opportunities to pass the examination (scoring at least 70%), showing a satisfactory understanding of the A2L Refrigerant. Students who fail the review on the second attempt are required to complete the full seven (7) hour course again.
- Q-01/Q-99 renewal applications **must submit Proof of Course Completion** with renewal

application in order to have their renewal processed.

QUESTIONS?

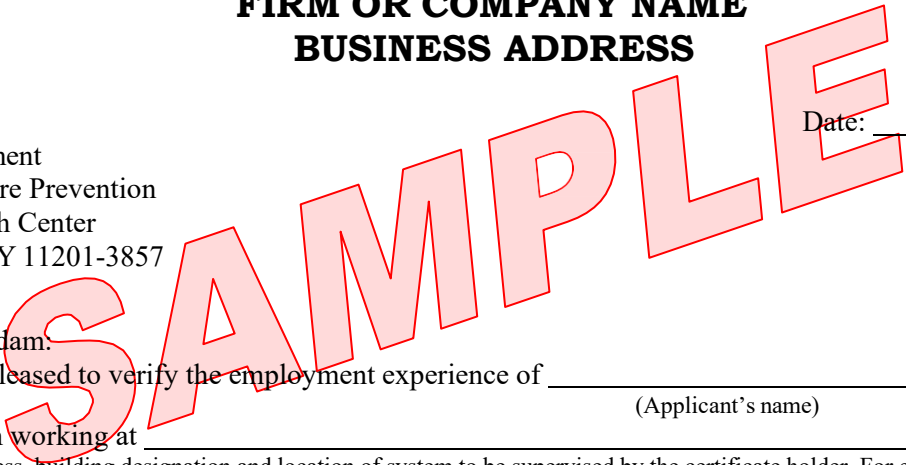
FDNY Business Support Team: For questions, call 311 and ask for the FDNY Customer Service Center or send an email to FDNY.BusinessSupport@fdny.nyc.gov.

Appendix A. (This sample letter is designed for QUALIFICATION REVIEW.)

**FIRM OR COMPANY NAME
BUSINESS ADDRESS**

Date: _____

Fire Department
Bureau of Fire Prevention
9 Metro Tech Center
Brooklyn, NY 11201-3857



Dear Sir/Madam:

I am pleased to verify the employment experience of _____ . This applicant
(Applicant's name)

has/had been working at _____
(Premises address, building designation and location of system to be supervised by the certificate holder. For example: 500 East 150th Street, B building, basement, east wing, Room B101)

from _____ to _____.
(mm/yyyy) (mm/yyyy)

His/her job duties included (list all that apply):

- practical operation under the supervision of a C of Q holder (C of Q #: _____) in a refrigerating or air conditioning equipment that has an individual system containing _____pounds of refrigerant.
- practical operation under the supervision of a C of Q holder (C of Q #: _____) in a refrigerating or air conditioning equipment that has a prime mover or compressor of _____horsepower.
- practical operation under the supervision of a C of Q holder (C of Q #: _____) in a refrigerating or air conditioning equipment that an aggregate of individual systems of _____horsepower each, with a total of _____horsepower.
- servicing and repair of refrigerating or air conditioning equipment rated _____horsepower.
- servicing and repair of refrigerating or air conditioning equipment containing _____pounds of refrigerant.

The applicant is a GOOD CHARACTER and is PHYSICALLY ABLE to perform the functions required by the holder of the Certificate of Qualification.

(Printed name of Employer) (Employer's title)

(Signature of Employer)

NOTE: The recommendation letter should be on employer's letterhead. If not on employer's letterhead, signature must be notarized.

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Appendix B

SUPERVISION REQUIREMENT FOR DIFFERENT REFRIGERATING SYSTEM

Installation Date	Refrigerant Group Or Name [(See Note 1)]	Occupancy Type [(See Note 2)]	Application	Pounds Of Refrigerant in System	System Horsepower	System Design [(see Note 3)]	Supervision Required
Prior to June 1, 1957,	A1	Industrial	Human comfort	More than 50	NA	Not fully automatic	Personal
	A1	Industrial	Human comfort	More than 200	NA	Fully automatic	Personal
	A1	Industrial	Human comfort	More than 50 up to 200	NA	Fully automatic	General
	A1	All except Industrial	All	More than 50	NA	Not fully automatic	Personal
	A1	All except Industrial	All	More than 200	NA	Fully automatic	Personal
	A1	All except Industrial	All	More than 50 up to 200	NA	Fully automatic	General
On or after June 1, 1957,	A1	Industrial	Human comfort	NA	More than 50 (or kilowatt equivalency)	NA	Personal
	A1	All except Industrial	All	NA	More than 50 (or kilowatt equivalency)	NA	Personal
Regardless of when installed	A2, A3, B1, B2, B3 and carbon dioxide	All	All	More than 50	NA	Not fully automatic	Personal
	A2, A3, B1, B2, B3 and carbon dioxide	All	All	More than 200	NA	Fully automatic	Personal
	A1	Industrial	All except human comfort	More than 50	NA	Not fully automatic	Personal
	A1	Industrial	All except human comfort	More than 200	NA	Fully automatic	Personal
	A1 and carbon dioxide	Industrial	All except human comfort	More than 50 up to 200	NA	Fully automatic	General
	A1	All	Human comfort	NA	Aggregate exceeds 100[see Note 4)]	NA	Personal

Note 1. For purposes of this table, refrigerant R-123 shall be treated as a group A1 refrigerant, and carbon dioxide shall not be treated as a group A1 refrigerant.

Note 2. For purposes of this table, “industrial” occupancy refers to occupancy groups F, H and S. For installations constructed under the 1968 Building Code, “industrial” occupancy refers to occupancy groups A, B and D. For installations constructed prior to such 1968 code, “industrial” occupancy refers to that portion of a building used for manufacturing, processing, or storage of materials or products, including, among others, chemical, food, candy, and ice cream factories, ice making plants, meat packing plants, refineries, perishable food warehouses, and similar occupancies.

Note 3. A fully automatic refrigerating system is one whose regulating and safety devices are automatically activated once the system is in operation.

Note 4. This aggregate provision applies only to systems within a single building which are under the sole direct control of a single occupant, lessee or owner. Systems with a rating of 15 horsepower or less or the kilowatt equivalency thereof are excluded from the aggregate.

Appendix C. (This sample letter should NOT be used for qualification review. This sample letter is used for applicants who passed the practical exam (Z-52) or who want to activate their Q-99 C of Q to become Q-01 C of Q holder or who seek to register MORE THAN ONE WORK LOCATION)

FIRM OR COMPANY NAME
BUSINESS ADDRESS

Date: _____

Fire Department
Bureau of Fire Prevention
9 Metro Tech Center
Brooklyn, NY 11201-3857

Dear Sir/Madam:

I am pleased to recommend _____ (applicant's name) to apply for a Certificate of Qualification to perform the duties of a refrigerating system operating engineer.

He/she has _____ (years, months) of experience and will be working at

(Premises address, building designation and location of system to be supervised by the certificate holder. For example: 500 East 150th Street, B building, basement, east wing, Room B101)

The information on the refrigerating system is to be supervised by this applicant:

- The name of the manufacturer of the refrigerating system

• The type and number of pounds of refrigerant in the system:

- The horsepower rating of the refrigerating system:

- The date of installation of the refrigerating system:

The applicant is a GOOD CHARACTER and is PHYSICALLY ABLE to perform the functions required by the holder of the Certificate of Qualification.

(Printed name of Employer) (Employer's title)

(Signature of Employer)

=====
(If the applicant is seeking to register more than one work location, please also complete the following.)

- In accordance with Fire Code FC Table 606.1.1, the refrigerating system requires supervision by a Certificate _____ of _____ Qualification _____ holder.
- The applicant will work the following days of the week: _____. The applicant will work from ____ am/pm to ____ am/pm of the days.

NOTE: The recommendation letter should be on employer's letterhead. If not on employer's letterhead, signature must be notarized.

NOTE: The applicant must also bring a valid FDNY permit for the refrigeration equipment that will be supervised by the applicant. (If the FDNY permit is not available due to lack of COQ holder's supervision, provide the copy of the violation.)

Fire Rule § 113-01 Certificates of Fitness and Certificates of Qualification

(f) Certificate of Qualification Application Requirements

(3) Registration of work locations

- (A) *Certificate of qualification* applicants or holders must register each work location at which they will be performing the duties of a refrigerating system operating engineer.
- (B) A *certificate of qualification* does not authorize the holder to perform such duties at any location other than work locations registered with the *Department*. A *certificate of qualification* holder shall not perform any duties requiring such certificate until such time a work location has been registered in accordance with this section. A *certificate of qualification* that does not have a work location registered with the *Department* shall be deemed "Not in Use" (inactive) and not valid to perform the duties of a refrigerating system operating engineer.
- (C) To register a work location, a *certificate of qualification* applicant or holder shall submit a letter from the employer for whom he or she will be performing the duties of a *certificate of qualification* holder. Such a letter shall be on business letterhead, and signed by an appropriate officer of the employer, and provide the following information and documentation:
 - (1) full name of the applicant.
 - (2) *premises* address, building designation and location of system to be supervised by the certificate holder (for example: 500 East 150th Street, B building, basement, east wing, Room B101).
 - (3) name of the manufacturer of the *refrigerating system*.
 - (4) type and number of pounds of refrigerant in the system.
 - (5) horsepower rating of the *refrigerating system*.
 - (6) date of installation of the *refrigerating system*; and
 - (7) a copy of the *Department permits* for such a *refrigerating system*.
- (D) *Certificate of qualification* applicants or holders seeking to register more than one (1) work location shall present a letter from the employer for each work location. In addition to the information and documentation set forth above, such a letter shall indicate the days and specific hours worked and specify whether the certificate holder would be providing *personal* or *general supervision* of the equipment in accordance with the requirements of FC606.1.1. A *certificate of qualification* shall not be registered for more than one (1) work location for the same day and time if *personal supervision* is required at more than one (1) such location.
- (E) *Certificate of qualification* holders seeking to change a registered work location shall register such work location in accordance with the procedures set forth in this section.