



Fire and Smoke Damper 2010

Scope and Knowledge Base
for the
Technician and Supervisor

Requirements
for the
Contractor

Fire and Smoke Damper Technician 2010

A Fire and Smoke Damper Technician 2010 is certified to the Scope and Knowledge Base below.

Scope

The Fire and Smoke Damper Technician competently performs installation, inspection, and maintenance of fire, smoke, combination fire/smoke dampers, and ceiling dampers in HVAC systems.

Knowledge Base

1. Design, Plans and Specifications (8% of exam)

A Fire and Smoke Damper Technician must be knowledgeable about the responsibilities of the architects, mechanical engineers and fire protection engineers including:

- 1.1. Purpose of fire and smoke dampers for life safety and protection of property.
- 1.2. Terminology commonly used in conjunction with fire and smoke dampers.
- 1.3. Symbols, definitions, and abbreviations commonly used on plans for HVAC systems.
- 1.4. Specifications for HVAC systems in SpecText and MasterSpec.

2. Basic Construction (2% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of types of construction and the principles of fire-resistant construction, structural protection, and fire and smoke containment by barriers.

3. Code Requirements (8% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of the duties and powers of the "Authorities Having Jurisdiction" (AHJ) and codes:

- 3.1. Fire code.
- 3.2. Mechanical code.
- 3.3. Building code.
- 3.4. Life safety code.

4. Standards and UL Tests for Dampers (8% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of UL procedures for product testing:

- 4.1. Knowledge of testing procedure for rating dampers.
- 4.2. Listing.
- 4.3. Classification.
- 4.4. Component recognition.
- 4.5. Product labeling.

A Fire and Smoke Damper Technician must be knowledgeable about damper testing and rating requirements in:

- 4.6. UL 555 Fire Dampers.
- 4.7. UL 555S (Smoke) Damper.
- 4.8. UL 555C Ceiling Radiation Dampers.

5. Damper Installation Manuals and Guidelines (10% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of various sources of damper installation manuals and guidelines from:

- 5.1. SMACNA: Fire, Smoke and Radiation Damper Installation Guide for HVAC Systems 2002.

- 5.2. AMCA: Publication 503-03 Fire, Ceiling (Radiation), Smoke and Fire/Smoke Dampers Application manual.
- 5.3. Manufacturer's installation guidelines.

6. Features and Components of Fire Dampers (10% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of the process of fire damper selection including:

- 6.1. Hourly fire resistance rating.
- 6.2. Operability.
- 6.3. Dynamic closure.
- 6.4. Mounting orientation.
- 6.5. Pressure drop.
- 6.6. Space envelope.

A Fire and Smoke Damper Technician must be knowledgeable of the function of fire damper accessories:

- 6.7. Sleeves.
- 6.8. Heat responsive devices.
- 6.9. Duct access doors.
- 6.10. Locking quadrants.
- 6.11. Mullions.
- 6.12. Blade position indicator.
- 6.13. Retaining angles.
- 6.14. Solenoid release.
- 6.15. Carbon dioxide (CO₂) release.

7. Features and Components of Smoke Dampers (12% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of the process of smoke damper selection including:

- 7.1. Leakage rating.
- 7.2. Temperature rating.
- 7.3. Operability under heat.
- 7.4. Flow and pressure.
- 7.5. Control function.
- 7.6. Actuating device.

8. Features and Components of Combination Fire/Smoke Dampers (8% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of the process of combination fire/smoke damper selection including:

- 8.1. Hourly fire resistance rating.
- 8.2. Leakage.
- 8.3. Temperature and operational ratings.
- 8.4. Blade styles.
- 8.5. Space envelope.

A Fire and Smoke Damper Technician must be knowledgeable of the various combination fire/smoke and smoke (leakage rated) damper accessories available including:

- 8.6. Actuator.
- 8.7. Override package.
- 8.8. EP switch (electro-pneumatic or solenoid valve).

9. Features and Components of Ceiling Radiation Dampers (6% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of the process of ceiling (radiation) damper selection including:

- 9.1. Floor/ceiling or roof/ceiling assembly design.
- 9.2. Types of ceiling dampers.
- 9.3. Space envelope.
- 9.4. Mounting configuration.

A Fire and Smoke Damper Technician must be knowledgeable of the function of ceiling (radiation) damper accessories:

- 9.5. Thermal blanket.
- 9.6. Volume control/balancing devices.
- 9.7. Fusible links.

10. Installation Methods of Dampers (12% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of the proper installation of dampers:

- 10.1. Using illustrations provided by manufacturer.
- 10.2. Appropriate fire separation clearances:
 - 10.2.1. Sleeves.
 - 10.2.2. Sleeve length.
 - 10.2.3. Sleeve thickness.
 - 10.2.4. Sleeve connection to duct.
 - 10.2.5. Damper attachment to sleeve.
 - 10.2.6. Rigid connection.
 - 10.2.7. Breakaway connection.
- 10.3. Actuators.
- 10.4. Retaining (mounting) angles.
- 10.5. Damper types:
 - 10.5.1. Rectangular, round and flat oval.
- 10.6. Airflow direction.
- 10.7. Access doors.

11. Damper Inspection and System Acceptance Testing (10% of exam)

A Fire and Smoke Damper Technician must be knowledgeable with regard to damper acceptance testing:

- 11.1. System objectives.
- 11.2. Inspection.
- 11.3. Component testing.
- 11.4. Functional testing.
- 11.5. Performance testing.
- 11.6. Documentation.

12. Process of Repairing Dampers and Documentation (6% of exam)

A Fire and Smoke Damper Technician must be knowledgeable of periodic damper inspection mandates as well as maintenance and repair requirements:

- 12.1. Tools.
- 12.2. Safety procedures and safe work practices.

Fire and Smoke Damper Supervisor 2010

A Fire and Smoke Damper Supervisor 2010 is certified to the Scope and Knowledge Base below.

Scope

The Fire and Smoke Damper Supervisor competently performs installation, inspection, and maintenance of fire, smoke, combination fire/smoke dampers, and ceiling dampers in HVAC systems. The supervisor has a comprehensive understanding of code language and confirms that all work was completed properly.

Knowledge Base

1. Design, Plans and Specifications (6% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable about the responsibilities of the architects, mechanical engineers and fire protection engineers including:

- 1.1. Purpose of fire and smoke dampers for life safety and protection of property.
- 1.2. Terminology commonly used in conjunction with fire and smoke dampers.
- 1.3. Symbols, definitions, and abbreviations commonly used on plans for HVAC systems.
- 1.4. Specifications for HVAC systems in SpecText and MasterSpec.

2. Basic Construction (6% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of types of construction and the principles of fire-resistant construction, structural protection, and fire and smoke containment by barriers.

3. Code Requirements (8% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of the duties and powers of the "Authorities Having Jurisdiction" (AHJ) and codes:

- 3.1. Fire code.
- 3.2. Mechanical code.
- 3.3. Building code.
- 3.4. Life safety code.

4. Standards and UL Tests for Dampers (8% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of UL procedures for product testing:

- 4.1. Knowledge of testing procedure for rating dampers.
- 4.2. Listing.
- 4.3. Classification.
- 4.4. Component recognition.
- 4.5. Product labeling.

A Fire and Smoke Damper Supervisor must be knowledgeable about damper testing and rating requirements as specified in:

- 4.6. UL 555 Fire Dampers.
- 4.7. UL 555S (Smoke) Damper.
- 4.8. UL 555C Ceiling Radiation Dampers.

5. Damper Installation Manuals and Guidelines (12% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of various sources of damper installation manuals and guidelines from:

- 5.1. SMACNA: Fire, Smoke and Radiation Damper Installation Guide for HVAC Systems 2002.
- 5.2. AMCA: Publication 503-03 Fire, Ceiling (Radiation), Smoke and Fire/Smoke Dampers Application manual.
- 5.3. Manufacturer's installation guidelines.

6. Features and Components of Fire Dampers (8% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of the process of fire damper selection including:

- 6.1. Hourly fire resistance rating.
- 6.2. Operability.
- 6.3. Dynamic closure.
- 6.4. Mounting orientation.
- 6.5. Pressure drop.
- 6.6. Space envelope.

A Fire and Smoke Damper Supervisor must be knowledgeable of the function of fire damper accessories:

- 6.7. Sleeves.
- 6.8. Heat responsive devices.
- 6.9. Duct access doors.
- 6.10. Locking quadrants.
- 6.11. Mullions.
- 6.12. Blade position indicator.
- 6.13. Retaining angles.
- 6.14. Solenoid release.
- 6.15. Carbon dioxide (CO₂) release.

7. Features and Components of Smoke Dampers (8% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of the process of smoke damper selection including:

- 7.1. Leakage rating.
- 7.2. Temperature rating.
- 7.3. Operability under heat.
- 7.4. Flow and pressure.
- 7.5. Control function.
- 7.6. Actuating device.

8. Features and Components of Combination Fire/Smoke Dampers (8% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of the process of combination fire/smoke damper selection including:

- 8.1. Hourly fire resistance rating.
- 8.2. Leakage.

- 8.3. Temperature and operational ratings.
- 8.4. Blade styles.
- 8.5. Space envelope.

A Fire and Smoke Damper Supervisor must be knowledgeable of the various combination fire/smoke and smoke (leakage rated) damper accessories available including:

- 8.6. Actuator.
- 8.7. Override package.
- 8.8. EP switch (electro-pneumatic or solenoid valve).

9. Features and Components of Ceiling (Radiation) Dampers (6% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of the process of ceiling (radiation) damper selection including:

- 9.1. Floor/ceiling or roof/ceiling assembly design.
- 9.2. Types of ceiling dampers.
- 9.3. Space envelope.
- 9.4. Mounting configuration.

A Fire and Smoke Damper Supervisor must be knowledgeable of the function of ceiling (radiation) damper accessories:

- 9.5. Thermal blanket.
- 9.6. Volume control/balancing devices.
- 9.7. Fusible links.

10. Installation Methods of Dampers (10% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of the proper installation of dampers:

- 10.1. Using illustrations provided by manufacturer.
- 10.2. Appropriate fire separation clearances.
- 10.3. Sleeves:
 - 10.3.1. Sleeve length.
 - 10.3.2. Sleeve thickness.
 - 10.3.3. Sleeve connection to duct.
 - 10.3.4. Damper attachment to sleeve.
 - 10.3.5. Rigid connection.
 - 10.3.6. Breakaway connection.
- 10.4. Actuators.
- 10.5. Retaining (mounting) angles.
- 10.6. Damper types:
 - 10.6.1. Rectangular.
 - 10.6.2. Round.
 - 10.6.3. Flat oval.
- 10.7. Airflow direction.
- 10.8. Access doors.

11. Damper Inspection and System Acceptance Testing (12% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable about damper acceptance testing:

- 11.1. System objectives.
- 11.2. Inspection.
- 11.3. Component testing.
- 11.4. Functional testing.
- 11.5. Performance testing.
- 11.6. Documentation.

12. Process of Repairing Dampers and Documentation (8% of exam)

A Fire and Smoke Damper Supervisor must be knowledgeable of periodic damper inspection mandates as well as maintenance and repair requirements:

- 12.1. Tools.
- 12.2. Safety procedures and safe work practices.


Fire and Smoke Damper Contractor 2010

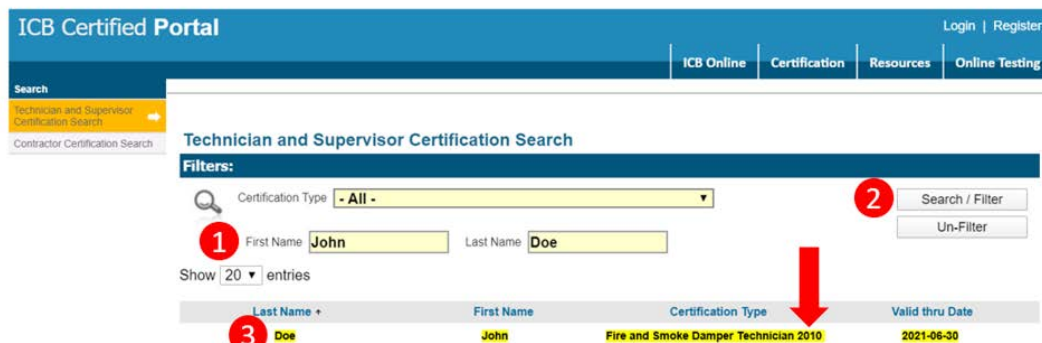
A Fire and Smoke Damper Contractor 2010 employs Fire and Smoke Damper Technicians and Supervisors who are certified for the 2010 Scope and Knowledge Base.

1. Requirements for ICB-certified contractors:

- 1.1. Contractors will ensure that a Supervisor oversees and coordinates projects involving work pertaining to the scope of the certification scheme, and that those projects are performed in accordance with applicable standards and procedures.
- 1.2. Contractors must employ Technicians and Supervisors to the extent required for certification and should seek to employ enough Technicians and Supervisors to perform all work in the scope of the certification.
- 1.3. Contractors and Supervisors shall only certify projects where the work was performed by certified Technicians employed by their own firm.

2. Steps for identifying the Scope and Knowledge Base for which Fire and Smoke Damper Technicians and Supervisors are certified:

- Go to:
- Click on: 
- 1 Enter name: First Name Last Name
- 2 Click on:
- 3 Valid certification will be displayed



The screenshot shows the ICB Certified Portal interface. At the top, there are navigation links for 'ICB Online', 'Certification', 'Resources', and 'Online Testing'. Below this is a search section titled 'Technician and Supervisor Certification Search'. The search filters are set to 'Certification Type: - All -', 'First Name: John', and 'Last Name: Doe'. A 'Search / Filter' button is visible. The search results are displayed in a table with the following columns: Last Name, First Name, Certification Type, and Valid thru Date. The first result is 'Doe, John, Fire and Smoke Damper Technician 2010, 2021-06-30'. A red arrow points to the 'Fire and Smoke Damper Technician 2010' certification type in the table.

Last Name	First Name	Certification Type	Valid thru Date
Doe	John	Fire and Smoke Damper Technician 2010	2021-06-30