

Certification: Commercial Mechanical Inspector



Exam ID: M2

Scope:

The Commercial Mechanical Inspector is responsible for performing inspections of mechanical systems installed in commercial applications and regulated by the International Mechanical Code. The inspector shall be capable of locating specific sections in the International Mechanical Code in order to interpret regulations and provide accurate information to applicants, contractors, property owners, and colleagues.

- 50 multiple-choice questions
- 2-hour limit
- Open book

01	General Administration	15%
0101	<u>Project Administration</u> Verify that required permits are issued and valid. Verify that products not detailed in the code are approved by the building official and installed according to their listing.	2%
0102	<u>Public Information and Legal</u> Provide general information on code provisions.	2%
0103	<u>Plan Reading</u> Verify that project information, including approved plans and specifications, is provided and is adequate. Verify that the mechanical system is installed according to approved plans.	6%
0104	<u>Manufacturer's Installation Instructions</u> Verify the manufacturer's installations and the listing of the equipment have been followed for installation.	5%
02	Heating/Cooling/Water Heaters	15%
0202	<u>Heating Equipment</u> Verify that the installations of mechanical equipment and appliances comply with code requirements, the manufacturer's instructions, and listing of the equipment, and have proper access, clearances, supply air, return air, and connection to ducts and plenums.	5%
0202	<u>Water Heaters and Boilers</u> Verify that the installation of water heaters and boilers complies with code requirements, the manufacturer's instructions, and listing of the equipment, and have proper access and clearances.	4%
0203	<u>Cooling and Refrigeration</u> Verify that the installation of cooling and refrigeration systems complies with code requirements, the manufacturer's instructions, and listing of the equipment, and have proper access and clearances, supply air, return air, and connection to ducts and plenums. Verify the proper class of refrigerants used. Verify that refrigeration piping, valves, and controls are installed according to code provisions. Verify size, clearances, access, exits, emergency controls, and signs in refrigeration rooms.	4%

0204	<u>Other Systems</u>	2%
	Verify that special systems utilizing fuel-burning equipment such as interior open-flame grills, pool and sauna heaters, hydronic heating systems, incinerators, crematories, decorative appliances, etc. comply with code requirements, the manufacturer’s instructions, and listing of the equipment, and have proper access and clearances.	
03	Exhaust and Ventilation Systems	20%
0301	<u>Ventilation Systems</u>	6%
	Verify that supply, return, outside air, and environmental exhaust air is provided and the installation of exhaust systems complies with code requirements. Verify that proper mechanical ventilation is provided where required.	
0302	<u>Hood and Kitchen Ventilation</u>	7%
	Verify compliance with code provisions for commercial hoods, kitchen ventilation, and filters. Verify size, location, clearances, materials, enclosures, motors, fans, and safety devices.	
0303	<u>Hazardous Vapors/Emergency Exhaust System</u>	3%
	Verify that the exhaust system for hazardous vapors is in accordance with the code and approved plans. Verify emergency exhaust systems for atrium, stairway, or smokeproof enclosures are in accordance with the code and approved plans.	
0304	<u>Product-Conveying Ventilation Systems</u>	4%
	Verify code compliance for product-conveying ventilation systems and ducts. Inspect motors, fans, filters, hoods, and enclosures. Inspect location, support, termination material, and construction of product-conveying systems.	
04	Duct Systems	12%
0401	<u>Duct Construction and Installation</u>	4%
	Verify that ducts are constructed of acceptable materials and that installation methods, including support and insulation, comply with code.	
0402	<u>Duct and Plenum Use and Application</u>	3%
	Verify the correct use and application of ducts and plenums with the mechanical system installed. Verify sizing of the supply and return air ducts.	
0403	<u>Smoke and Fire Dampers</u>	5%
	Verify the correct location, use, and application of smoke and fire dampers and volume and balancing dampers, and that they are installed in accordance with the code and approved plans.	
05	Combustion Air	14%
0501	<u>Combustion Air</u>	14%
	Verify proper sources of air supply for fuel burning appliances, and size and location of openings. Verify that materials and installation of combustion air ducts comply with code.	
06	Chimneys and Vents	14%
0601	<u>Venting of Fuel-Burning Appliances</u>	8%
	Verify size, type, location, clearances, connections, and terminations of vents and venting systems.	

0602	<u>Chimney and Vent Connectors</u>	6%
	Verify size, type, location, and clearances of chimney and vent connectors for compliance with code.	
07	Fuel Supply Systems	10%
0701	<u>Fuel Supply Installation and Sizing</u>	7%
	Verify that gas piping systems are installed with proper materials, with proper supports, and are sized properly. Verify that fuel gas piping is tested for tightness.	
0702	<u>Fuel System Connections</u>	3%
	Verify that fittings, valves, connections, and transition of materials are in compliance with code.	