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| • IFC – CO | MMERCIAL KITCHEN | HOODS & COMM | ERCIAL COOKING C | PERATIONS | |
| IBC – CC SYSTEMS | MMERCIAL COOKIN | IG OPERATIONS & | ALTERNATIVE AUTO | MATIC FIRE-EX | TINGUISHING |
| • IMC - CC | | HOOD VENTILAT | ON SYSTEM DUCTS | & EXHAUST EC | QUIPMENT |
| WHAT A EXTINGU | RE WE TALKING ABO ISHING SYSTEM, THI | DUT HERE; THE HO E VENTILATION AN | ODS, THE OPERATION D EXHAUST EQUIPM | NS, THE FIRE- ENT? | |
| A SINGLI COOKIN | DOCUMENT THAT (G OPERATIONS AND | CAPTURES ALL OF D EQUIPMENT" | THE REQUIREMENTS | – PERHAPS: "C | COMMERCIAL |
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506.3.2.5 GREASE DUCT TEST.

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| 506.3.4 AIR V | VELOCITY. |
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| GREASE DUCT SYSTEMS SERVING A TYPE I HOOD SHALL BE DESIGNED AND INSTALLED TO PROVIDE AN AIR VELOCITY WITHIN THE DUCT SYSTEM OF NOT LESS THAN 500 FEET PER MINUTE (2.5 M/S). HOW IS THIS MEASURED/CONFIRMED? ANEMOMETERSI | |



506.3.6 GREASE DUCT CLEARANCES.

WHERE ENCLOSURES ARE NOT REQUIRED, GREASE DUCT SYSTEMS AND EXHAUST EQUIPMENT SERVING A TYPE I HOOD SHALL HAVE A CLEARANCE TO COMBUSTIBLE CONSTRUCTION OF NOT LESS THAN 18 INCHES (457 MM), AND SHALL HAVE A CLEARANCE TO NONCOMBUSTIBLE CONSTRUCTION AND GYPSUM WALLBOARD ATTACHED TO NONCOMBUSTIBLE STRUCTURES OF NOT LESS THAN 3 INCHES (76 MM).
 EXCEPTION: LISTED AND LABELED – PER MANUFACTURER INSTALLATION INSTRUCTIONSI















- \cup 506.3.9 GREASE DUCT HORIZONTAL CLEANOUTS. CLEANOUTS SERVING HORIZONTAL SECTIONS OF GREASE DUCTS SHALL:

- 1. BE SPACED NOT MORE THAN 20 FEET (6096 MM) APART.
- 2. BE LOCATED NOT MORE THAN 10 FEET (3048 MM) FROM CHANGES IN DIRECTION THAT ARE GREATER THAN 45 DEGREES (0.79 RAD). 3. BE LOCATED ON THE BOTTOM ONLY WHERE OTHER LOCATIONS ARE NOT AVAILABLE AND SHALL BE PROVIDED WITH INTERNAL DAMAING OF THE OPENNES SUCH THAT GREASE WILL FLOW PAST THE OPENNES WITHOUT POCHNG. BOTTOM CLEANOUTS AND OPENNES STARLE & APPROVED POR THE APPLICATION AND INSTALLED LOUDE TORT.
- 4. NOT BE CLOSER THAN 1 INCH (25 MM) FROM THE EDGES OF THE DUCT.
- 5. HAVE OPENING DIMENSIONS OF NOT LESS THAN 12 INCHES 87 12 INCHES (305 MM, BY 305 MM), WHEE SUCH DIMENSIONS PRECLUED INSTILLATION, THE OPENING SHALL BE NOT LESS THAN 12 INCHES (305 MM) ON ONE SIDE AND SHALL BE LARGE ENOUGH TO PROVIDE ACCESS FOR CLEANING AND MAINTENANCE. 6. SHALL BE LOCATED AT GREASE RESERVORS.

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FACTORY-BUILT GREASE DUCTS INCORPORATING INTEGRAL ENCLOSURE MATERIALS SHALL BE LISTED AND LABELED FOR USE AS OREASE DUCT ENCLOSURE ASSEMBLES SPECIFICALLY EVALUATED FOR SUCH PURPOSE IN ACCORDANCE WITH <u>UL 2221</u>. DUCT PENETRATION S SHALL BE PROTECTED WITH A THROUGH-PENETRATION SINGLI BE PROTECTED WITH A THROUGH-PENETRATION RESITOP SYSTEM TESTED AND LISTED IN ACCORDANCE WITH <u>ASSEMBLE</u> AND HAVING AN "P" AND "T" RATING EQUAL TO THE FIRE-RESISTANCE RATING OF THE ASSEMBLY BEING PENETRATED. THE CAREASE DUCT ENCLOSURE ASSEMBLY AND FIRESTOP SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE LISTING AND THE MANUFACTURER'S INSTRUCTIONS.

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IMC CONTINUED: SECTION 507 COMMERCIAL KITCHEN HOODS

 COMMERCIAL KITCHEN EXHAUST HOODS SHALL COMPLY WITH THE REQUIREMENTS OF THIS SECTION. HOODS SHALL BE TYPE I OR II AND SHALL BE DESIGNED TO CAPTURE AND CONFINE COOKING VAPORS AND RESIDUES. A TYPE I OR TYPE II HOOD SHALL BE INSTALLED AT OR ABOVE APPLIANCES IN ACCORDANCE WITH SECTIONS 507.2 AND 507.3. WHERE ANY COOKING APPLIANCE UNDER A SINGLE HOOD REQUIRES A TYPE I HOOD, A TYPE I HOOD SHALL BE INSTALLED. WHERE A TYPE II HOOD IS REQUIRED A TYPE I HOOD SHALL BE INSTALLED. WHERE A TYPE II HOOD IS INSTALLED, THE INSTALLATION OF THE ENTIRE SYSTEM, INCLUDING THE HOOD, BINETS, EXHAUST EQUIPMENT AND MARKUP AIR SYSTEM SHALL COMPLY WITH THE REQUIREMENTS OF SECTIONS 506, 507, 508 AND 509.

| HOODS | |
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| HOOD. AN AIR INTAKE DEVICE USED TO CAPTURE BY ENTRAPMENT, IMPINGEMENT, ADHESION OR SIMILAR MEANS, GREASE, MOISTURE, HEAT AND SIMILAR CONTAMINANTS BEFORE THEY ENTER A DUCT SYSTEM. | |
| TYPE I. A KITCHEN HOOD FOR COLLECTING AND REMOVING GREASE VAPORS AND SMOKE. SUCH HOODS ARE EQUIPPED WITH A FIRE SUPPRESSION SYSTEM. | |
| TYPE II. A GENERAL KITCHEN HOOD FOR COLLECTING AND REMOVING STEAM, VAPOR, HEAT, ODORS AND PRODUCTS OF COMBUSTION. | |
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| 507.1.1 OPERATION | |
|--|--|
| COMMERCIAL KITCHEN EXHAUST HOOD SYSTEMS SHALL OPERATE DURING THE COOKING OPERATION. THE HOOD DEXHAUST BATE SHALL COMPLY WITH SECTION SOFT HE HOOD OR SHALL COMPLY WITH SECTION SOFT HE EXHAUST FAN SERVING A TYPE I HOOD SHALL KORT CONTROLS THAT WILL ACTIVATE THE FAN WHEN ANY APPLIANCE THAT REQUIES SUCH TYPE I HOOD DIS TURNED ON, OR A MEANS OF INTERLOCK SHALL BE PROVIDED THAT WILL PREVENT OPERATION OF SUCH APPLIANCES WHEN THE EXHAUST FAN IS NOT TURNED ON, WHERE CONE OR SHALL CONTROLS THE THE EXHAUST FAN IS NOT TURNED ON. WHERE CONE OR SHALL CONTROLS THE THE EXHAUST FAN IS NOT TURNED ON. WHERE CONE OR SHALL CONTROLS THE THE EXHAUST FAN IS NOT TURNED ON. WHERE CONE OR SHALL BOR OF SUCH APPLIANCE SEVED BY THAT HOOD ASS BEN TURNED ON A WHERE TO READINAT ENERGY SENSORS ARE USED TO ACTIVATE A TYPE I HOOD EXHAUST FAN, THE FAN SHALL ACTIVATE NOT MORE THAN IS MINUTES AFTER THE READING TO PRIVATE SEVENDED BY THAT HOOD ASS BEN TURNED ON A METHED ON A WHERE SHALL NOT AND THE SHALLST HAD DO SYSTEM AND APPLIANCES EXPERIMENTING AND THE SHALLST FAN IS MALL AND A METHOD OR SHALL AND A MATTEND OR METHOD AND SHALL AND A MADANTE AND A MATTEND OR MALL AND A MADANTE AND A | |
| COOKING APPLIANCES SHALL NOT INVOLVE OR DEPEND ON ANY COMPONENT OF A FIRE-EXTINGUISHING SYSTEM. | |
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| HEAVY-DUTY COOKING APPLIANC | ж — |
| AVY-DUTY COOKING APPLIANCES INCLUDE ECTRIC UNDER-FIRED BROILERS, ELECTRIC CHAIN ONVEYOR) BROILERS, GAS UNDER-FIRED BROILERS, AS CHAIN (CONVEYOR) BROILERS, GAS OPEN- IRNER RANGES (WITH OR WITHOUT OVEN), ECTRIC AND GAS WOK RANGES, SMOKERS, AOKER OVENS, AND ELECTRIC AND GAS OVER- RED (UPRIGHT) BROILERS AND SALAMANDERS. | |

















- FITERS SHALL BE INSTALLED AT AN ANGLE OF NOT LESS THAN 45 DEGREES
 (0.79 RAD) FROM THE HORIZONTAL AND SHALL BE EQUIPPED WITH A DRIP
 TRAY BENEATH THE LOWER EDGE OF THE FILTERS.
- 507.2.9 GREASE GUTTERS FOR TYPE I HOOD.
- GREASE GUTTERS SHALL DRAIN TO AN APPROVED COLLECTION RECEPTACLE THAT IS FABRICATED, DESIGNED AND INSTALLED TO ALLOW ACCESS FOR CLEANING.















507.6.1 CAPTURE AND CONTAINMENT TEST. The PERMIT HOLDER SHALL VERIFY CAPTURE AND CONTAINMENT PERFORMANCE OF THE EXHAUST SYSTEM. THIS FIELD TEST SHALL BE CONDUCTED WITH ALL APPLIANCES UNDER THE HOOD AT OPERATING TEMPERATURES, WITH ALL SOURCES OF OUTDOOR AIR PROVIDING MAKEUP AIR FOR THE HOOD OPERATING AND WITH ALL SOURCES OF

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RECIRCULATED AIR PROVIDING CONDITIONING FOR THE SPACE IN WHICH THE HOOD IS LOCATED OPERATING. CAPTURE AND CONTAINMENT SHALL BE VERIFIED VISUALLY BY OBSERVING SMOKE OR STEAM PRODUCED BY ACTUAL OR SIMULATED COOKING, SUCH AS THAT PROVIDED BY SMOKE CANDLES AND SMOKE PUFFERS. SMOKE BOMBS SHALL NOT BE USED.

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PROVIDED WITH AN APPROVED AUTOMATIC FIRE SUPPRESSION SYSTEM COMPLYING WITH THE INTERNATIONAL BUILDING CODE AND THE INTERNATIONAL FIRE CODE. • AGAIN – THE IBC, IFC, IMC AND THE IFGC









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| • [F] 904.10 • AUTOMATI SHALL BE [THE PROVI | FENERAL. IC FIRE-EXTINGUISHING S DESIGNED, INSTALLED, INS ISIONS OF THIS SECTION | YSTEMS, <mark>OTHER TH/</mark> SPECTED, TESTED AN AND THE APPLICAB | <mark>an</mark> automa D maintain Le referenc | atic sprinkl IED in Accc IED Standai | ER SYSTEMS, IRDANCE WITH RDS. |
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[F]904.2.2 COMMERCIAL HOOD AND DUCT OSYSTEMS.

 EACH REQUIRED COMMERCIAL KITCHEN EXHAUST HOOD AND DUCT SYSTEM REQUIRED BY <u>SECTION 609</u> OF THE INTERNATIONAL FIRE CODE OR <u>CHAPTER 5</u> OF THE INTERNATIONAL MECHANICAL CODE TO HAVE A TYPE I HOOD SHALL BE PROTECTED WITH AN APPROVED AUTOMATIC FIRE-EXTINGUISHING SYSTEM INSTALLED IN ACCORDANCE WITH THIS CODE.







































607.3.2 GREASE EXTRACTORS

- WHERE GREASE EXTRACTORS ARE INSTALLED, THEY
 SHALL BE OPERATED WHEN THE COMMERCIAL-TYPE
 COOKING EQUIPMENT IS USED.
- 607.3.3 CLEANING.

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 HOODS, GREASE-REMOVAL DEVICES, FANS, DUCTS AND OTHER APPURTENANCES SHALL BE CLEANED AT INTERVALS AS REQUIRED BY <u>SECTIONS</u> <u>607.3.3.1</u> THROUGH <u>607.3.3.3</u>.



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607.4 APPLIANCE CONNECTION TO BUILDING PIPING GAS-FIRED COMMERCIAL COOKING APPLIANCES INSTALLED ON CASTERS AND APPLIANCES THAT ARE MOVED FOR CLEANING AND SANITATION PURPOSES SHALL BE CONNECTOR USTED AS COMPLYING WITH AN APPLIANCE CONNECTOR USTED AS COMPLYING WITH AN APPLIANCE CONNECTOR USTED AS PULANCE CONNECTOR INSTALLATION SHALL BE CONFIGURED IN ACCORDANCE WITH THE MANUFACTURE'S INSTALLATION INSTRUCTIONS. MOVEMENT OF APPLIANCES WITH CONSTRUCT ACCORDANCE WITH THE CONNECTOR IND APPLIANCE MANUFACTURE'S INSTRUCTIONS.















| 0 | CHAPTER 1 |
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| | 1.7 QUALIFICATIONS. ONLY TRAINED PERSONS SHALL BE CONSIDERED COMPETENT TO DESIGN OR LAY OUT, INSTALL, AND SERVICE WET CHEMICAL SYSTEMS. |
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| • 6.4.8 – S SYSTEM, AND ELEC | (STEM OPERATIONAI THE MANUAL RELEAS TRICAL POWER. | L TESTS: FUNCTIONA E DEVICES, THE GAS | L TESTS OF THE A SHUTOFF, THE SF | UTOMATIC DI IUTOFF OF M | etection Akeup Air, | |
| • 6.4.10.3 - REPORT A | - THE INSTALLING CO CCEPTABLE TO THE A | ONTRACTOR SHALL (AHJ. | COMPLETE AND S | IGN AN ACCE | PTANCE TEST | |
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| • 5.4.2 – LIS EQUIVALEN | ED HOOD ASSEMBLIES : | | ACCORDANG | CE WITH UL 71 | IO OR | |
| 6.1.2 – LIS NOT AN IN ACCORDA | ED GREASE FILTERS AND TEGRAL COMPONENT C NCE WITH ANSI/UL 104 | D GREASE REMOVA DF A SPECIFIC LISTE 6 AND <mark>SHALL BE DE</mark> | L DEVICES TH D EXHAUST H SIGNATED OI | AT ARE REMOV OOD SHALL BE N THE FILTER. | 'ABLE BUT E LISTED IN | |
| • 6.1.3 - ME | SH FILTERS SHALL NOT BE | E USED UNLESS AN | SI/UL (INTEGR | ATED INTO UN | VIT) | |
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| ੱ | CHAPTER 8 | |
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| • | 8.2.3.1 – A HOOD EXHAUST FAN(S) SHALL CONTINUE TO OPERATE AFTER THE EXTINGUISHING SYSTEM HAS BEEN ACTIVATED UNLESS FAN SHUTDOWN IS REQUIRED BY A LISTED COMPONENT OF THE VENTILATION SYSTEM OR BY DESIGN OF THE EXTINGUISHING SYSTEM. | |
| • | 8.2.3.3 – THE EXHAUST FAN SHALL BE PROVIDED WITH A MEANS SO THAT THE FAN IS ACTIVATED WHEN ANY HEAT-PRODUCING COOKING APPLIANCE UNDER THE HOOD IS TURNED ON. | |
| | 8.3.2 – WHEN THE FIRE-EXTINGUISHING SYSTEM ACTIVATES, MAKEUP AIR SUPPLIED INTERNALLY TO A HOOD SHALL BE SHUT OFF. | |
| • | SIMILAR BUT DIFFERENT THAN THE IMC! | 0 |
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| 0 | OTHER CHAPTERS | |
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| CHAPTER 9 | P – AUXILIARY EQUIPMENT | |
| CHAPTER 1 | 0 - FIRE EXTINGUISHING EQUIPMENT (SAME AS NFPA 17A) | |
| CHAPTER 1 | 1 - PROCEDURES FOR INSPECTION, TESTING AND MAINTENANCE | |
| CHAPTER 1 | 2 - MINIMUM SAFETY REQUIREMENTS FOR COOKING EQUIPMENT | |
| CHAPTER 1 | 3 - RECIRCULATING SYSTEMS | |
| CHAPTER 1 | 4 SOLID FUEL COOKING OPERATIONS | 0 |
| CHAPTER 1 | 5 – DOWNDRAFT APPLIANCE VENTILATION SYSTEMS | 0 |
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