AMEREX TECH Tip № 46

PROTECTING AIRCRAFT & AIRCRAFT OPERATIONS FROM THE GROUND

You are bidding the contract for an airport expansion or for a new airfield, or maybe you are taking over the maintenance at an existing airport, do you know how many, what type and where all the fire extinguishers are required? Airports are large, complex operations with many different hazards and many different codes and standards to reference and follow. This Tech Tip is meant to consolidate those requirements and to point out specific Amerex Models to protect these hazards. **Fire codes and standards change and evolve over time. It is critical that you follow the most current IFC and NFPA requirements presently being enforced in your jurisdiction.**

Which standards apply to protecting aircraft and aircraft facilities with portable fire extinguishers? IFC, NFPA and FAA? It is important to understand that the Federal Aviation Administration (FAA) covers everything that goes up in the air while the IFC and NFPA codes and standards address everything on the ground. This Tech Tip will focus on the IFC and NFPA codes and standards. Amerex will address the FAA requirements for inside aircraft as well as Heliports and Vertiports in a later tech tip.

The IFC and NFPA codes and standards primarily reference *NFPA 10* as the minimum standard for fire extinguishers protecting aircraft and aircraft facilities. The IFC designates specific requirements for some of these hazards as stated below in 906.1.

- **IFC - 906.1 Where required – Portable fire extinguishers shall be installed in all of the following locations:**
  5. Where required by the sections indicated in Table 906.1

Table 906.1

SECTION	SUBJECT
2005.2	Aircraft towing vehicles
2005.3	Aircraft welding apparatus
2005.4	Aircraft fuel-servicing tank vehicles
2005.5	Aircraft hydrant fuel-servicing vehicles
2005.6	Aircraft fuel-dispensing stations
2005.7	Heliports and helistops

- **IFC - 2005.1 General – Portable fire extinguishers suitable for flammable or combustible liquid and electrical-type fires shall be provided as specified in Sections 2005.2 through 2005.6 and Section 906. Extinguishers required by this section shall be inspected and maintained in accordance with Section 906.**
- **IFC - 906.2 General Requirements – Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.**
- **NFPA 10 - 5.5.5.1 * – Where portable fire extinguishers are required to be installed, the following documents shall be reviewed for the occupancies outlined in their respective scopes: NFPA 407, 409, 410, 460.**
  These additional standards will dictate what type of fire extinguishers must be used and where they shall be located.
- **NFPA 10 - 5.5.5.2 – In no case shall the requirements of the documents in 5.5.5.1 be less than those specified in this standard.**
  NFPA 10 - 5.5.4 mandates large-capacity 10 lb Dry Chemical extinguishers with discarge rates of 1 lb/sec for pressurized liquid and gas, three-dimensional, and obstacle fires. *These will be addressed in a later Tech Tip.*

NOTE: The use of ABC Dry Chemical is prohibited near aircraft per NFPA and IFC. Please see Tech Tip 20 for more details.

Referenced Publications
International Fire Code 2024 (IFC 2024)
NFPA 10, Standard for Portable Fire Extinguishers, 2026 edition.
NFPA 407, Standard for Aircraft Fuel Servicing, 2022 edition.
NFPA 409, Standard on Aircraft Hangars, 2022 edition.
NFPA 410, Standard on Aircraft Maintenance, 2025 edition.
NFPA 460, Standard for Aircraft Rescue and Firefighting Services at Airports, 2024 edition.

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Where are Extinguishers Required?	Standard	Passage	Performance Requirements	Location/ Travel Distance	Recommended Fire Extinguisher
Aircraft Rescue and Fire Fighting (ARFF) Vehicles	NFPA 460	**5.5.1, 5.5.2**	Class D 20 lb minimum	On each ARFF vehicle	B570
Aviation Fueling Facilities / Service Ramps and Aprons	NFPA 407	**4.1.10.1, 4.2.7.1, 5.2.7**	Wheeled 80B at each gate (200')	At each gate or stand or 200' length of ramp	490, 497
Aviation Fueling Facilities / Fueling Operations	NFPA 407	**4.1.10.1, 4.2.7.1**	NFPA 410 - Wheeled 80B	Gate / Stand / 200' of ramp	490, 497
Aviation Fueling Facilities / Fueling Vehicle Loading Positions or Racks	NFPA 407	**5.1.10**	40B:C / 20 lb Dry Chem	Each vehicle loading position or rack / 50'	794, 762
Aviation Fueling Facilities / Two Fueling Vehicle Loading Positions or Racks on a Common Island	NFPA 407	**5.1.10.1**	40B:C / 20 lb Dry Chem	One per island	794, 762
At Fuel Dispensing Stations	IFC Chapter 20	**2005.6**	< 200 GPM = 2 - 20B:C, >200GPM but less than 350GPM = 1 80B:C / 125 lb, >350GPM = 2 80B:C / 125 lb	Not more than 75' from pumps or dispensers	794, Wheeled 759, 490
Airport Fueling Vehicles / Aircraft Fuel Servicing Tank Vehicles	NFPA 407	**6.1.10.1**	2 - 40B:C / 20 lb Dry Chem	On each side of vehicle	794, 762
Aircraft Fuel-Servicing Tank Vehicles	IFC Chapter 20	**2005.4**	2 - 20B:C	Ready access from either side of the vehicle	794, 762
Hydrant Fuel-Servicing Vehicle	IFC Chapter 20	**2005.5**	1 - 20B:C	On each vehicle	794, 762
Airport Fueling Vehicles / Hydrant Fuel Servicing Vehicle or Cart	NFPA 407	**6.1.10.2**	40B:C / 20 lb Dry Chem	On each hydrant fuel servicing vehicle	794, 762
Self Service Aircraft Fueling	NFPA 407	**8.1.10.1, 8.1.10.2**	40B:C / 20 lb Dry Chem	At each dispenser and emergency shut off control	794, 762
Aircraft Hangers / Aircraft Storage and Servicing Areas	NFPA 409	**8.3.2, 10.8.2.1, 11.14, 14.2**	NFPA 10 Extra Hazard 40B or 80B minimum ratiang	40B = 30' or 80B = 50'	794, 762, Wheeled 759, 490
Defueled Aircraft Hangers / Aircraft Storage and Servicing Areas	NFPA 409	**14.7.2**	NFPA 10 Ordinary Hazard 10B or 20B minimum rating	10B = 30' or 20B = 50'	722
Aircraft Hangers / Other Areas	NFPA 409	**8.3.3, 10.8.2.2, 11.14.14.3**	NFPA 10 Light, Ordinary, or Extra Hazard	Depends on an analysis of each area or room	Determined on-site
Aircraft Maintenance / Electrical Maintenance	NFPA 410	**10.2.2**	10B:C / 6.8 kg (15 lb)	Immediate vicinity—within 50'	Clean Agent 398
Aircraft Maintenance / O2 Systems Test / Repair Operations	NFPA 410	**10.2.3**	10B:C / 6.8 kg (15 lb)	Immediate vicinity—within 50'	Clean Agent 398
Aircraft Maintenance / Fuel Transfer Operations	NFPA 410	**10.2.4**	2 - 20 lb (1 lb / sec)	Immediate vicinity—within 50'	794, 762
Aircraft Maintenance / Air Ventilation Operations	NFPA 410	**10.2.5**	10B:C / 6.8 kg (15 lb)	Immediate vicinity—within 50'	415
Aircraft Maintenance / Fuel Tank Repair Operations	NFPA 410	**10.2.6**	10B:C / 6.8 kg (15 lb)	Immediate vicinity—within 50'	415
Aircraft Maintenance / Pressure Testing of Fuel Systems	NFPA 410	**10.2.7**	2 - 20 lb (1 lb / sec)	Each side of aircraft	794, 762
Aircraft Maintenance / Cleaning, Paint Removal, or Painting	NFPA 410	**10.2.8**	10B:C / 6.8 kg (15 lb) + additional 80BC FE	Immediate vicinity + Within the service area 50'	415 + B460
Aircraft Maintenance / Welding Operations	NFPA 410	**10.2.9**	10B:C / 6.8 kg (15 lb) + additional 80BC FE	Immediate vicinity + Within the service area 50'	415 + B460
Welding Apparatus	IFC Chapter 20	**2005.3**	2A:20B:C	On apparatus	Contact Amerex
Aircraft Maintenance / Cleaning and Refurbishing Operations	NFPA 410	**10.2.10**	2A:10B:C / 6.8 kg (15 lb)	At cabin entrance	398
Aircraft Maintenance / Ramp Operations	NFPA 410	**10.2.11**	Wheeled 80B	At each gate or stand or 200' length of ramp	490
Aircraft Towing Vehicles	IFC Chapter 20	**2005.2**	1 - 20B:C	Mounted on vehicle	794, 762

The recommendations presented in the chart above are based on the minimum classification and discharge rates as defined by applicable codes and standards. Site-specific evaluations, hazard analysis, or other enforceable codes and standards may necessitate selecting an alternative solution to those recommended. For further clarification or assistance, please contact Amerex Corporation.

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