



Parking Garage Hazard Protection for Electric Vehicles





Exploring

Hazard Control for Parking Structures

Automotive manufacturers are using more plastics, larger fuel tanks, combustible metals, and lithium-ion battery technology to improve performance and reduce emissions. At the same time, parking structures are increasingly housing charging stations to entice electric vehicle owners with a convenient parking experience. Throughout this era of rapid growth, fire codes and standards have followed suit, increasing hazard recommendations to prepare building owners. Our Diamond Doser® fire protection system powered by F-500 EA® offers a tailor-made solution.

2021

FM Global

FM Global increases the hazard class for all parking structures from HC-2 to HC-3 to add protection.

2022

NFPA 13

NFPA increases the recommended hazard rating for all parking structures from Group 1 to Group 2.

2023

NFPA 88A

NFPA requires all parking structures to have a sprinkler system installed in accordance with NFPA 13.

Hazard Control Technologies, Inc.

150 WALTER WAY, FAYETTEVILLE, GEORGIA 30214 / +1 770 719 5112 / INFO@HCT-WORLD.COM / HCT-WORLD.COM

Make a Bigger Impact with a Lower Sprinkler Application Density, F-500 EA[®], and Diamond Doser[®]

Applus+ Approved
at 6.67 LPM/M²
(0.15 GPM/FT²)

DEKRA on F-500 EA[®] for Sprinkler Systems

“Special risks require special measures. The use of F-500 EA[®] in the special risk of storage and/or use (charging) of lithium-ion batteries is a possible option permitted under German building law to cover this risk, although classic sprinkler technology or the use of foam agents does not cover this risk or does not cover it adequately. Fire tests carried out in accordance with NFPA can also be used as proof of the design of sprinkler systems [...]”

Retrofit your existing setup with our Applus+ approved Diamond Doser[®] fire protection system to meet new fire codes and standards without doing a complete overhaul.



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Applus+ Approved

Certified ETI 23/32306438

In July of 2023, our complete Diamond Doser® fire protection system was tested at Applus+'s facility in Spain to ensure optimum safety, performance, consistency, and sustainability that accounts for recent updates to global fire codes and standards.



Specification

Sprinkler Nozzles	Tyco D3 (2 Nozzles/Parking Space)
Flow Rate	250 LPM (66 GPM)
Extinguishing Area	37.5 M ² (404 FT ²)
Sprinkler Application Density	6.67 LPM/M ² (0.15 GPM/FT ²)
Working Pressure	3 BAR (43.5 PSI)
Water Requirement	14,600 L (3,857 G)
Proportioning Agent	3% F-500 EA®
F-500 EA® Requirement	440 L (120 G)
Proportioning System	F-500 EA® Diamond Doser®
Operating Time	60 Minutes

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System Benefits

Performance

Protect your facility against multi-class and three-dimensional hazards when you make F-500 EA® your agent of choice.

Continuity

Improve accuracy with a mechanical pump unit, driven by water flow alone, to adjust dosing as more heads open.

Sustainability

Avoid unexpected discharges, pollution, and disposal costs when you add a Dosing Return Valve (DRV) to your unit.

Maintenance

Save resources with effortless installation, upkeep, and NFPA mandated testing. Enjoy easy access to your atmospheric tank.

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Parking Garages

Preserve your facility's structural integrity while extinguishing ICE, hybrid, and electric vehicle fires.



Bus Depots

Protect electric bus fleets and prevent the spread of fire to adjacent vehicles in a constricted environment.



Charging Stations

Detect fires early on to safeguard critical infrastructure utilizing significantly less water and resources.

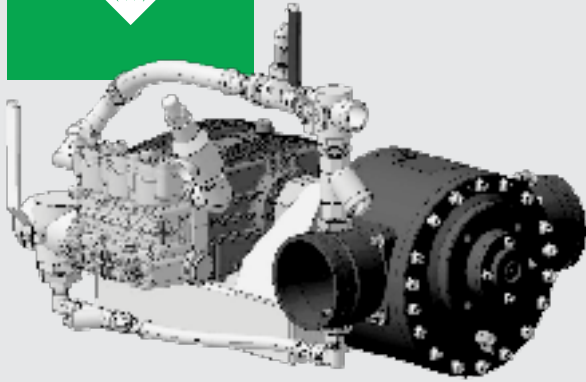


Airports

Secure aircrafts, airports, car parks, hangars, rental centers, and runways with FAA recognized technology.

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Higher application rates can be achieved when two DD 10000 Diamond Doser® units are placed parallel on a skid to deliver a flow rate of 20,000 LPM (5,284 GPM) at 3%.

Unit #	Minimum Flow		Maximum Flow		Inlet
DD 00180	40 LPM	11 GPM	180 LPM	48 GPM	1.50"
DD 00450	75 LPM	20 GPM	450 LPM	119 GPM	2.00"
DD 00800	150 LPM	40 GPM	800 LPM	212 GPM	2.50"
DD 01200	180 LPM	48 GPM	1,200 LPM	317 GPM	3.00"
DD 01800	170 LPM	45 GPM	1,800 LPM	475 GPM	4.00"
DD 02400	230 LPM	61 GPM	2,400 LPM	634 GPM	4.00"
DD 03200	300 LPM	79 GPM	3,200 LPM	846 GPM	6.00"
DD 04500	400 LPM	106 GPM	4,500 LPM	1,190 GPM	6.00"
DD 06000	500 LPM	132 GPM	6,000 LPM	1,587 GPM	6.00"
DD 08000	800 LPM	212 GPM	8,000 LPM	2,116 GPM	8.00"
DD 10000	1,000 LPM	265 GPM	10,000 LPM	2,645 GPM	10.00"

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