

Kidde ECS Advanced Delivery Fire Suppression System Component Description

Fan Nozzles 180° and 360° Assembly 1/2 in., 3/4 in.,
1 in., 1-1/4 in., 1-1/2 in., 2 in. P/N: 90-1944XX-XXX



Effective: June 2014

K-90-107

FEATURES

- *"Fan" Pattern Allows for a Faster Rate of Vaporization*
- *Unique Nozzle Interior Design Allows for Superior Flow Control*
- *180° is mounted 1-1/2 inch from Side Wall*
- *Brass or Stainless Steel*
- *Minimum Nozzle Pressure of 72 PSI (5 bar)*
- *Recess Option (Minimum of 1/2 inch from Ceiling)*
- *Custom Drilled to Fit Specific Applications*
- *UL Listed for Use with the ADS Only*
- *FM Approved for Use with the ADS Only*
- *Kidde Patented Technology*
- *RoHS Compliant*

DESCRIPTION

Kidde ECS ADS Fire Suppression System with FM-200[®] Agent 180° and 360° Fan Nozzles are built with a flat discharge pattern, or a "fan" pattern, which allows for a faster rate of vaporization. The large area of coverage that is created by the nozzle's "fan" action, allows the agent to discharge closer to the nozzle and vaporize quickly to create the proper mixture between the agent and the nitrogen.

The nozzles are designed with unique interior profile to provide a smooth transitional direction change for the agent upon discharge. This type of design allows the agent to keep much of its momentum as it leaves the nozzle—momentum is necessary to provide agent distribution at greater distance. The nozzles are custom drilled for each application, allowing the nozzles to be effective in large or small spaces.

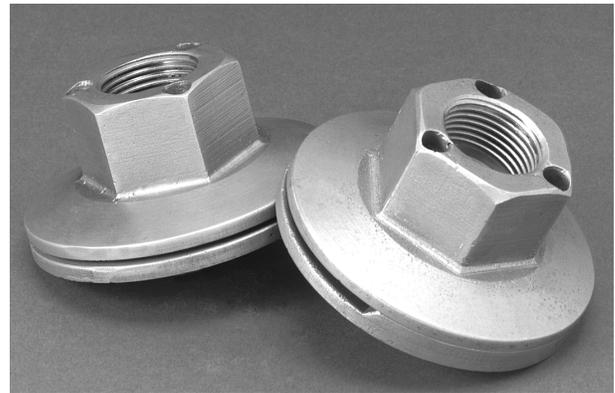
Another design feature that the Kidde ECS ADS System nozzles offer is a downward discharge angle from the nozzle which controls the interaction of the vaporizing discharged liquid with ceiling surfaces, which is to be avoided.

When mounted, the nozzles offer a recess option with a minimum placement of 1/2 inch from the ceiling. The 180° nozzle can also be located 1½ inch from the side wall. The nozzles have a sleek, discrete profile, for an aesthetically pleasing look.

MAINTENANCE

MONTHLY

1. Ensure that there are no obstructions to hinder distribution of FM-200[®] Agent.
2. Visually inspect nozzles for physical damage or clogging. Replace or clean if required. If nozzles are replaced, new nozzles used must be the same part number in the same location.



SPECIFICATIONS

MATERIALS

Body: Brass or Stainless Steel

Approx. Weight 360° Nozzle:

1/2 in. and 3/4 in.: 1.3 lb. (0.59 kg)

1 in. through 2 in.: 4.5 lb. (2.00 kg)

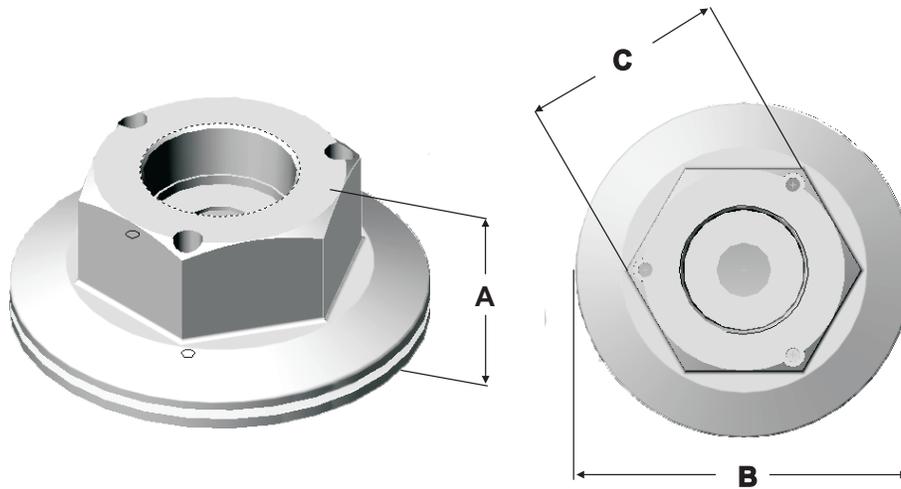
Approx. Weight 180° Nozzle:

1/2 in. and 3/4 in.: 1.3 lb. (0.59 kg)

1 in. through 2 in.: 5.0 lb. (2.30 kg)

Note: Please refer to the Design, Installation, Operation and Maintenance Manual (P/N 06-236068-001) for associated nozzle part numbers and orifice areas.

DIMENSIONS



Nominal Size	180° Nozzle						360° Nozzle					
	A		B		C		A		B		C	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
1/2"	1.47	37	3	76	1.5	38	1.44	36.5	3	76	1.5	38
3/4"	1.52	39	3	76	1.5	38	1.47	37	3	76	1.5	38
1"	1.98	50	5	127	3	76	1.92	49	5	127	3	76
1¼"	2.06	52	5	127	3	76	1.96	50	5	127	3	76
1½"	2.13	54	5	127	3	76	2	51	5	127	3	76
2"	2.29	58	5	127	3	76	2.08	53	5	127	3	76

ORDERING INFORMATION

Refer to the Kidde Fire Systems ECS Advanced Delivery Fire Suppression System with FM-200® Agent: DIOM (P/N 06-236068-001) for part number information.

FM-200 is a registered trademark of E.I. du Pont de Nemours and Company. Kidde is a registered trademark of Kidde-Fenwal Inc. All other trademarks are the property of their respective owners.

This literature is provided for informational purposes only. KIDDE-FENWAL, INC. assumes no responsibility for the product's suitability for a particular application. The product must be properly applied to work correctly. If you need more information on this product, or if you have a particular problem or question, contact Kidde-Fenwal Inc.



MAINTENANCE

According to NFPA standards, the following inspection and/or maintenance procedure must be scheduled as listed below and performed upon the occurrence of any event which might affect the reliability of the system.

QUARTERLY INSPECTION

1. Check the pressure gauges of each agent storage container. If the pressure gauge indicates a loss in pressure of 10% or more, then it shall be recharged or replaced. Pressure varies with temperature, and this must be taken into account when checking the pressure gauge. In the range of 55°F to 85°F (13°C to 29°C) the change is approximately 3 PSI per degree F (0.2 bar per degree C).
2. Check all components, including supporting hardware, and tighten, repair or replace as required.
3. Replace any component if at all in doubt of its ability to perform properly.

SEMI-ANNUAL INSPECTION

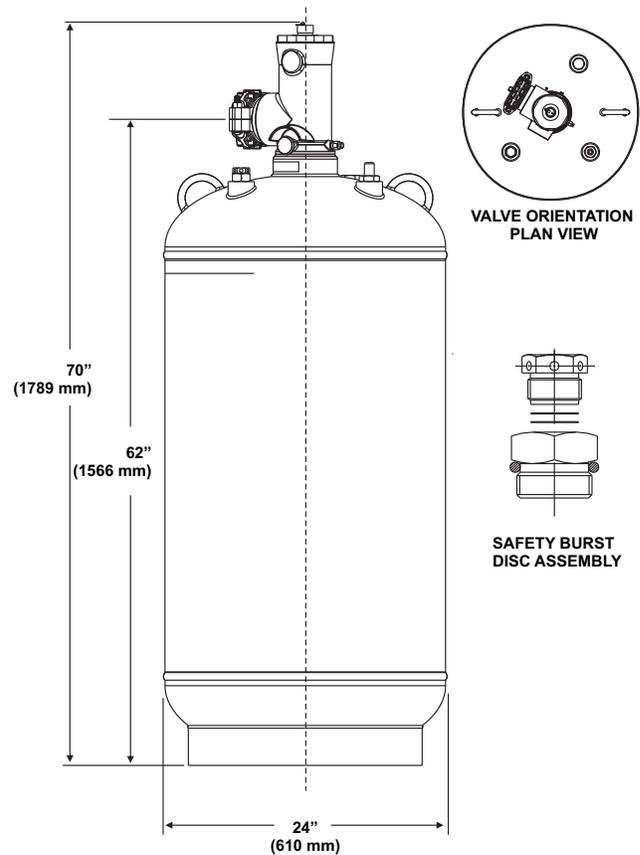
Qualified personnel should determine the amount of agent in all containers. The optional liquid level indicator may be used to measure agent supply and compare it to the original net weight which is marked on the container label. If the measured net weight is less than 95% of the original charged weight the container should be recharged or replaced.

Inspect all piping, fittings and nozzles for looseness, dirt or other damage. All outlet piping must be clean and free of dirt, chips, fillings and other foreign material that may cause the system to become inoperative or ineffective at the time of discharge.

SPECIFICATIONS

Part Number	90-100900-001 90-100901-001	
	imperial	metric
Fill range	390-900 lb.	178-408 kg
Height	70 in.	1789 mm
Diameter	24 in.	610 mm
Internal Volume	13.0 cu. ft.	0.368 cu. m
Empty Weight	505 lb.	229 kg
Temperature Range	32°F to 130°F	0°C to 54°C
Safety Relief Burst Range	800 to 975 PSIG	5.5 to 6.7 Mpa
Construction Specification	DOT 4BW-500	DOT 4BW-500

DIMENSIONS



ACCESSORIES

Description	Part number
3-inch stainless steel flexible hose	06-118225-001
3-inch swing check valve	06-118058-001
Cylinder bracket	06-236125-001
Cylinder supervisory pressure switch	06-118262-001*

*For cylinder valves manufactured prior to May 1, 2013 use supervisory pressure switch P/N: 06-118263-001.

This literature is provided for informational purposes only. KIDDE-FENWAL, INC. assumes no responsibility for the product's suitability for a particular application. The product must be properly applied to work correctly. If you need more information on this product, or if you have a particular problem or question, contact KIDDE-FENWAL, INC., Ashland, MA 01721. Telephone: (508) 881-2000.

 **Kidde Fire Systems**

400 Main Street
Ashland, MA 01721
Tel.: 508-881-2000
Fax: 508-881-8920
www.kiddefiresystems.com