

Moisture/Ember Separators (MES)



Vehicles used in firefighting applications are often exposed to airborne burning embers. If these burning embers are drawn into the engine air intake of a piece of equipment, they can burn holes or ignite the paper in the air cleaner filter. This event can cause severe engine damage, leaving the vehicle or equipment inoperable.

Even though some air cleaner filters have flame retardant media, a burning ember can still burn holes through the media and render it ineffective, leading to engine damage.

Racor MES capture burning embers and allow them to burn completely out, turning them into harmless ash. They also efficiently remove airborne liquid water from the air as it passes through, protecting the engine from water ingestion.

NFPA (National Fire Protection Association) standards require all firefighting apparatus have ember separators on the engine air intake system.



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Design Considerations

To size an ember separator for a particular application, it is necessary to know the maximum air intake flow rate of the engine. The velocity of air flowing through the ember/moisture separator must not exceed 1000 feet per minute. This can be calculated by dividing the air flow rate in cubic feet per minute by the face area of the ember separator in square feet (ember separator width X height).

Features and Benefits

- Meets NFPA guidelines
- Removes embers from air flow
- Many sizes and optional faceplates are available
- Periodic cleaning or replacement of screen is all that's required after installation
- All MES units are 1" thick



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Part Number	Width	Height	Area
123970001	20.0 in. (50.8 cm)	8.0 in. (20.3 cm)	160 in. ² (1032 cm ²)
123970002	8.6 in. (21.8 cm)	7.9 in. (20.1 cm)	68 in. ² (439 cm ²)
123970003	20.0 in. (50.8 cm)	5.5 in. (14.0 cm)	110 in. ² (710 cm ²)
123970004	9.0 in. (22.9 cm)	20.8 in. (52.8 cm)	187 in. ² (1206 cm ²)
123970005	12.0 in. (30.5 cm)	9.5 in. (24.1 cm)	114 in. ² (735 cm ²)
123970006	10.8 in. (27.4 cm)	9.3 in. (23.6 cm)	100 in. ² (645 cm ²)
123970007	20.8 in. (52.8 cm)	11.3 in. (28.7 cm)	235 in. ² (1516 cm ²)
123970008	15.0 in. (38.1 cm)	4.0 in. (10.2 cm)	60 in. ² (387 cm ²)
123970009	7.8 in. (19.8 cm)	7.8 in. (19.8 cm)	61 in. ² (394 cm ²)
123970010	5.9 in. (15.0 cm)	20.6 in. (52.3 cm)	122 in. ² (787 cm ²)
123970011	8.0 in. (20.3 cm)	9.0 in. (22.9 cm)	72 in. ² (465 cm ²)
123970012	5.5 in. (14.0 cm)	16.3 in. (41.4 cm)	90 in. ² (581 cm ²)
123970013	25.0 in. (63.5 cm)	3.5 in. (8.9 cm)	88 in. ² (568 cm ²)
123970014	3.5 in. (8.9 cm)	12.0 in. (30.5 cm)	42 in. ² (271 cm ²)
123970015	15.5 in. (39.4 cm)	8.0 in. (20.3 cm)	124 in. ² (800 cm ²)
123970016	8.8 in. (22.4 cm)	23.0 in. (58.4 cm)	202 in. ² (1303 cm ²)
123970017	12.8 in. (32.5 cm)	5.3 in. (13.5 cm)	68 in. ² (439 cm ²)
123970018	9.5 in. (24.1 cm)	5.3 in. (13.5 cm)	50 in. ² (323 cm ²)
123970019	7.0 in. (17.8 cm)	16.0 in. (40.6 cm)	112 in. ² (723 cm ²)
123970020	6.8 in. (17.3 cm)	11.9 in. (30.2 cm)	81 in. ² (523 cm ²)
123970021	17.1 in. (43.4 cm)	11.4 in. (29.0 cm)	195 in. ² (1258 cm ²)
123970022	16.3 in. (41.4 cm)	5.5 in. (14.0 cm)	90 in. ² (581 cm ²)
123970023	5.5 in. (14.0 cm)	10.0 in. (25.4 cm)	55 in. ² (355 cm ²)
123970024	22.0 in. (55.9 cm)	4.0 in. (10.2 cm)	88 in. ² (568 cm ²)
123970025	19.0 in. (48.3 cm)	16.0 in. (40.6 cm)	304 in. ² (1961 cm ²)
123970026	25.2 in. (64.0 cm)	4.4 in. (11.2 cm)	111 in. ² (716 cm ²)
123970027	11.1 in. (28.2 cm)	5.3 in. (13.5 cm)	59 in. ² (381 cm ²)
123970028	11.9 in. (30.2 cm)	3.0 in. (7.6 cm)	36 in. ² (232 cm ²)

All Racor MES units have a depth of 1". Optional faceplate can be provided.