

Passive Filters—The Smart Choice!

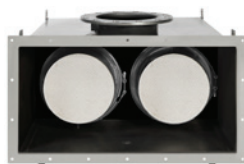
Passive vs. Active Diesel Particulate Filters for Emergency Generators

ATTRIBUTE	JOHNSON MATTHEY'S PASSIVE CRT [®] (+) DPF SYSTEM	ACTIVE DPF SYSTEM
Product Design	Diesel Oxidation Catalyst (DOC) plus wall-flow ceramic filter	Electrically heated metallic fiber filter
Filter Regeneration Technology	<ul style="list-style-type: none"> >> NO is converted to NO₂ over the DOC >> NO₂ combusts the soot, regenerating the filter 	<ul style="list-style-type: none"> >> Electro-mechanical >> Filter is enclosed and electrically heated to remove the soot to regenerate the filter
Heat Source for Regeneration	Engine exhaust	External electrical heating elements
Converts CO, HC and HAPs	Yes	Catalyst must be added to convert CO, HC and HAPs
Regeneration method matches Engine OEM recommended maintenance and helps to avoid wet stacking of engine	Yes	No
Regeneration Frequency	Annual	Regenerates frequently
Proven Technology and In-Use Durability	<ul style="list-style-type: none"> In-use since the 1980s >> 5 million installed on on-road cars and trucks >> 200,000 installed on retrofitted trucks and off-road equipment >> 300 installed on stationary generators 	Relatively new/limited installed base
Product Weight and Size	Lightweight, compact, small footprint, silencing built-in	Heavy, large footprint
Assured Filter Readiness for Operation	SootAlert™ monitor assures that the CRT+ System is always ready for operation	Electrical supply is required
Maintenance	Simple, no moving parts	<ul style="list-style-type: none"> >> Moving mechanical components >> Difficult-to-replace filters requiring skilled labor to service >> Electrical components could short
External Heat Source Required	No	Yes
Dedicated Power Source Required	No	Yes
Total Cost of Ownership over 10 years, including purchase price and fuel	Lowest	<ul style="list-style-type: none"> >> Highest—approximately 2 to 3 times the cost of passive¹ >> Maintenance costs unknown due to limited installed base

¹Based on 1000 kW genset



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