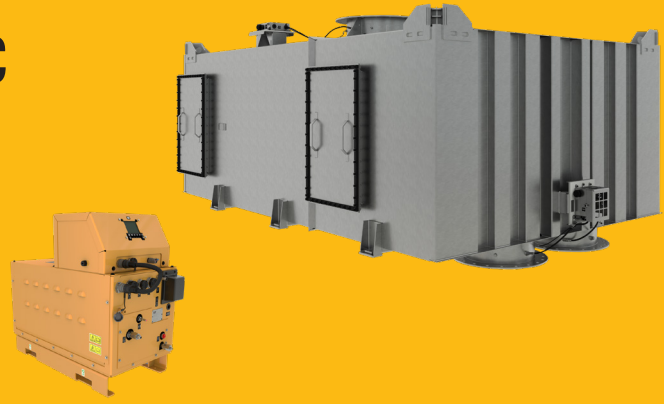


CAT® SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

For new and existing engines in standby electric power applications



SCR System

- Includes the SCR housing, called the Clean Emissions Module (CEM) which contains the catalysts and injector.
- Includes the dosing cabinet which provides Diesel Exhaust Fluid (DEF) to the injector in the CEM.

Performance

- CEM housing with optional insulation blanket provides superior heat retention for maximum emissions reduction.
- Caterpillar control system ensures reliable emissions reduction and optimal performance.

Durability

- CEM housing is constructed of stainless steel for superior life in indoor and outdoor installations.
- Specialized mounting feet allow natural thermal expansion during operation.

Serviceability

- Separate access panels for the SCR and Diesel Oxidation Catalyst (DOC)/Diesel Particulate Filter (DPF) areas allow easy accessibility to the catalysts for inspection or service.
- Access panels are fully removable and can be lifted without the need for cranes.
- Catalysts are packaged in lightweight, easy-to-handle modules.

Support

- One source for warranty on complete package that includes worldwide Cat® dealer coverage on engine and aftertreatment.
- SCR system is supported by our best in class 2 year warranty and available customer value agreements (CVAs).

Flexibility

- Multiple SCR catalyst options are available to reduce Nitrogen Oxides (NO_x) in a broad range of applications.
- CEM housing is configurable with catalyst options DOC or DPF to reduce Carbon Monoxide (CO), Hydrocarbons (HC), and Particulate Matter (PM).

Ease of Installation

- Mounting bosses provide easy installation of harnesses on site as well as a durable method of retention during operation.
- Integral lifting eyes reduce guesswork and potential safety issues involved with moving the unit by providing attachment points that promote stability.
- Integrated mixing tube and silencing comes standard with each unit.
- Interconnect junction boxes and wiring harnesses provide efficient connections.
- Painted steel dosing cabinet, available in standard and high capacity, provides a single connection point for the electrical, air, and DEF needed to promote optimal emissions reduction to the SCR system.

Optional Attachments

- Insulation blanket for the CEM housing reduces surface temperature for additional safety.
- Single system DEF transfer pump skid.
- Multi system DEF transfer pump skid.
- Serviceable DEF supply filter.



CAT® SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

For new and existing engines in standby electric power applications

Performance

Max. NO _x Reduction ¹	Up to 95%
Max. CO Reduction ¹	Up to 95%
Max. HC Reduction ¹	Up to 90%
Max. PM Reduction ¹	Over 85%
Silencing Capability ²	Up to 45 dB(A)
Warranty	2 years or 8,000 hours of operation, whichever comes first and CVAs ³

¹Emission reduction results vary by engine and application.

²Silencing capability varies with engine and aftertreatment configuration.

³CVAs are arrangements between you and your Cat dealer to help control maintenance costs.

Catalysts (SCR) and Optional (DOC/DPF)

Construction	Ceramic
Catalysts Serviceable	Yes
Fuel Tolerance – Sulfur (ppm) ⁴	
– Standard Temperature SCR	– 1000 or less
– High Temperature SCR	– 50 or less
– DOC	– 500 or less
– DPF	– 15 or less
Oil Tolerance (ash content)	CJ-4 or better (all catalysts)
Fuel Tolerance – Biofuels (ASTM 6751-075 B100)	B20 or less (all catalysts)

⁴Must use the lowest common denominator.

Dosing Cabinet / Dimensions and Weights

Construction		Painted steel		
Standard Size (60 L/hr pump)				
Height	Width	Depth	Weight (Dry)	Weight (Wet)
845 mm (33 in)	500 mm (20 in)	940 mm (37 in)	123 kg (256 lb)	138 kg (303 lb)
Standard Size (120 L/hr pump)				
903 mm (35.5 in)	566 mm (22.3 in)	1052 mm (41.4 in)	148 kg (326 lb)	163 kg (360 lb)
Voltage Requirements				
Dosing pump and EMI filter		100/240 – 50/60 Hz VAC single phase electrical power		
Cabinet mounted controller and system sensors		Powered by the engine 24VDC power		

Optional Attachments	Description	Media Number
CEM Insulation		
DEF Transfer Skid (Single Engine)	120 VAC; 60 Hz; DEF Filter included	LEHE21724
DEF Transfer Skid (Multi Engine)	400 VAC; 50 Hz or 480 VAC; 60 Hz for up to 6 Dosing Systems; each dosing system requires a DEF Filter purchased separately	LEHE21724
DEF Filter	40 Micron; ¾-16 STOR ports; accommodates up to 25 gal/min	

CEM Housing

Construction	Stainless Steel
Configuration ⁵	BITO – (Dual) Bottom Inlet Top Outlet. BILO – (Dual) Bottom Inlet Left Side Outlet. BIRO – (Dual) Bottom Inlet Right Side Outlet. QBILO – Quad Bottom Inlet Left Side Outlet.
Inlet / Outlet Type	Flange
Lifting Eyes	Qty. 4 at Corners
Access Panel (SCR)	Side Mounted, Lifiable
Access Panel (DOC / DPF)	Side Mounted, Lifiable

⁵Not available in every catalyst/configuration combination.

Inlet / Outlet (Number / Size)

	Inlet	Outlet
3 x 3		
– BITO	1 x 305 mm / 12.0 in	1 x 508 mm / 20.0 in
5 x 4		
– BITO, BILO, BIRO	2 x 508 mm / 20.0 in	1 x 610 mm / 24.0 in
– QBILO	4 x 254 mm / 10.0 in	1 x 610 mm / 24.0 in

Dimensions

	Length	Width	Height
3 x 3			
– BITO	4242 mm / 167 in	2210 mm / 87 in	1700 mm / 67 in
5 x 4			
– BITO	4190 mm / 165 in	3175 mm / 125 in	1855 mm / 73 in
– BILO, BIRO, QBILO	4190 mm / 165 in	3300 mm / 130 in	1750 mm / 69 in

Refer to Installation Drawings for exact dimensions.

Weights (Est.) (CEM with Catalysts) (Without Insulation)

	3 x 3	5 x 4
SCR	2650 kg (5845 lb)	3000 – 3550 kg (6615 – 7825 lb)
SCR + DOC	2737 kg (6035 lb)	3325 – 4150 kg (7330 – 9150 lb)
SCR + DPF	2849 kg (6280 lb)	3350 – 4200 kg (7385 – 9260 lb)

Contact your local Dealer for exact weights.

Contact your Cat dealer in situations where standard features listed above do not meet required project specifications.

For more information, contact your local Cat dealer or visit www.cat.com/aftertreatment.

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