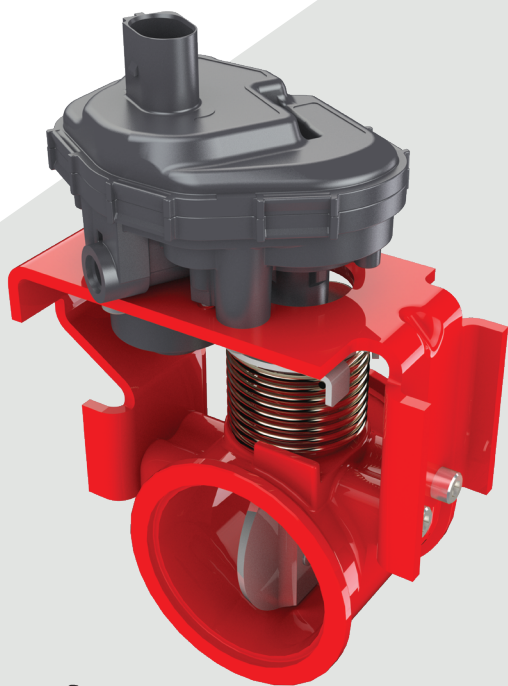
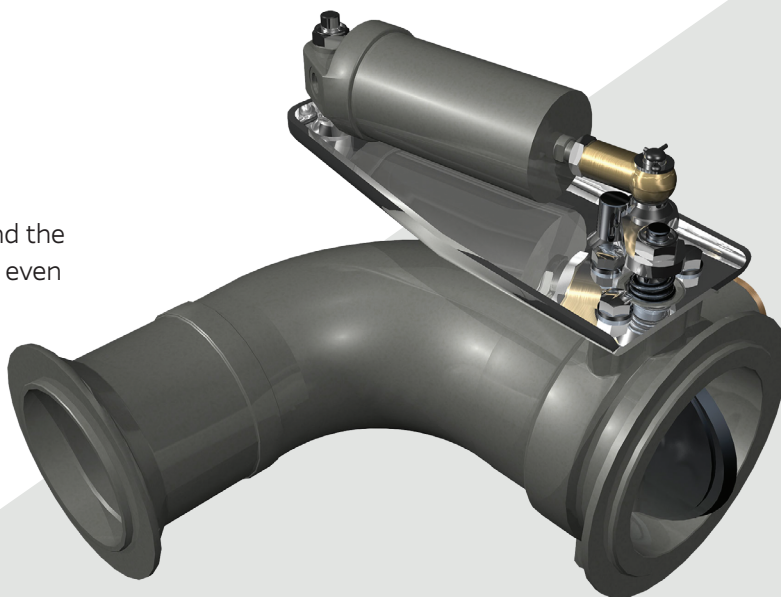




# Exhaust Brakes

## For engine braking and thermal management

Jacobs Engine Brakes® and Exhaust Brakes have provided drivers with increased braking performance for decades and the technologies continue to evolve. Today, these technologies even help to reduce emissions. This was first accomplished with variable valve actuation, then with cylinder deactivation, and now with exhaust throttling to help meet emissions regulations. Jacobs has adapted its long-standing, robust exhaust brake technology for thermal management use for modern commercial vehicle engines, while still retaining its well-know capability as a retarding device.



*Jacobs*®



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## How it works

The Jacobs® exhaust throttle works by actuating a flap downstream of the turbo to increase exhaust backpressure and reduce mass flow through the engine. Used alone, the exhaust brake provides light retarding when exposed to the increased backpressure by increasing the work of the piston during the exhaust stroke.



### IDEAL FOR LIGHT- AND MEDIUM-PERFORMANCE APPLICATIONS

where retarding is needed, but packaging and cost are significant drivers



### COMBINE WITH A JACOBS BLEEDER OR COMPRESSION RELEASE ENGINE BRAKE

for enhanced performance in medium- and heavy-duty applications

## Reducing emissions

The Jacobs Exhaust Brake® works well for thermal management by increasing the enthalpy applied to the aftertreatment catalyst(s).

Next-generation aftertreatment systems can include a dual dosing strategy with a diesel exhaust fluid (DEF) injector located as close to the turbo as possible. This makes it difficult to use an exhaust brake because the DEF will not be fully decomposed by the time it contacts the throttle. Our innovative DEF corrosion-resistant exhaust throttle can be used in these systems without function degradation.



### THERMAL MANAGEMENT DEVICE

that effectively increases the workload on the engine and reduces mass flow through the exhaust to increase the enthalpy applied to the catalyst



### USE AS A FAST WARM-UP OR KEEP-IT-WARM DEVICE

to significantly reduce the engine's nitrogen oxide (NO<sub>x</sub>) output



### DEF-RESISTANT SYSTEMS

available for dual dosing applications where the diesel exhaust fluid (DEF) has not fully decomposed before it comes into contact with the throttle



## Configurations

### Design

- Flange mounted
- Turbo flange mounted
- Various flange diameters

### Control

- Pneumatically controlled
- Electronically controlled
- Two position with a pre-set orifice for backpressure limit control
- Dynamically controlled fully variable position

### Material

- Standard cast iron
- DEF-resistant stainless steel



Cummins Inc.  
Box 3005  
Columbus, IN 47202-3005  
U.S.A.

[cummins.com](http://cummins.com)

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