

Intake manifold Application

VSCA for Diesel

VCMA for Gasoline



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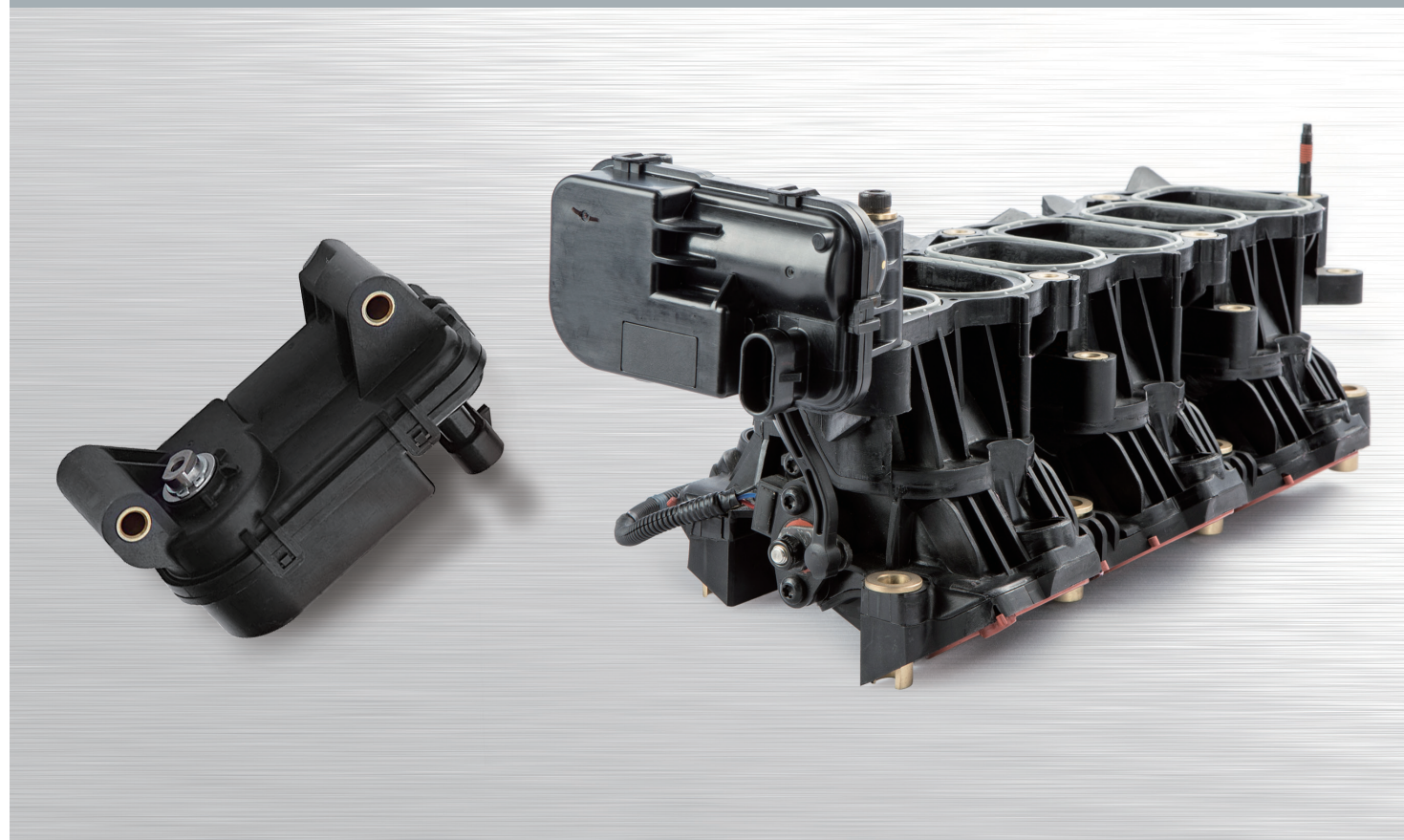
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## VCMA Variable Charging Motion Actuator



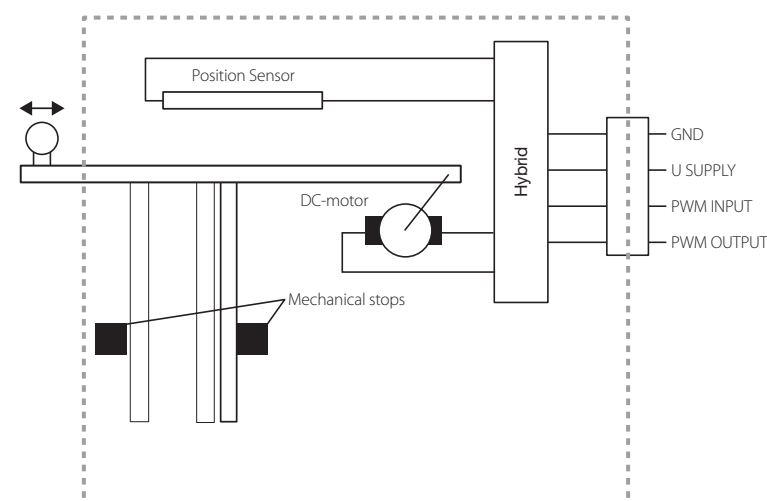
VCMA can vary the length of the intake track in order to optimize power, torque and emission, as well as provide better fuel efficiency.

### FEATURES

- Compact design and low weight
- Quick response
- Simple and direct actuation
- Intelligent and Simple Type

### TECHNICAL INFORMATION

- Operating voltage : 9V~16V (Nominal : 12V)
- Operating temperature : - 40~140°C
- Starting torque : Min. 70Ncm at worst case
- Response time : <200ms



## VSCA Variable Swirl Control Actuator



As a part of swirl generation systems, the actuator is used for continuous adjustment of swirl control valve in the intake manifold. Integrated position sensor feeds back the actual Value of the angle position to the engine control unit.

### FEATURES

- High durability
- Fail-safe function
- Compact design & low weight
- Quick response
- Flexibility for the package
- Simple Type

### TECHNICAL INFORMATION

- Operating voltage : 9V~16V (Nominal : 12V)
- Operating temperature : - 40~140°C
- Starting torque : Min 70Ncm at worst case
- Return spring torque : 27 ~ 34Ncm
- Response time : <200ms

