

# Engine Management Sensors



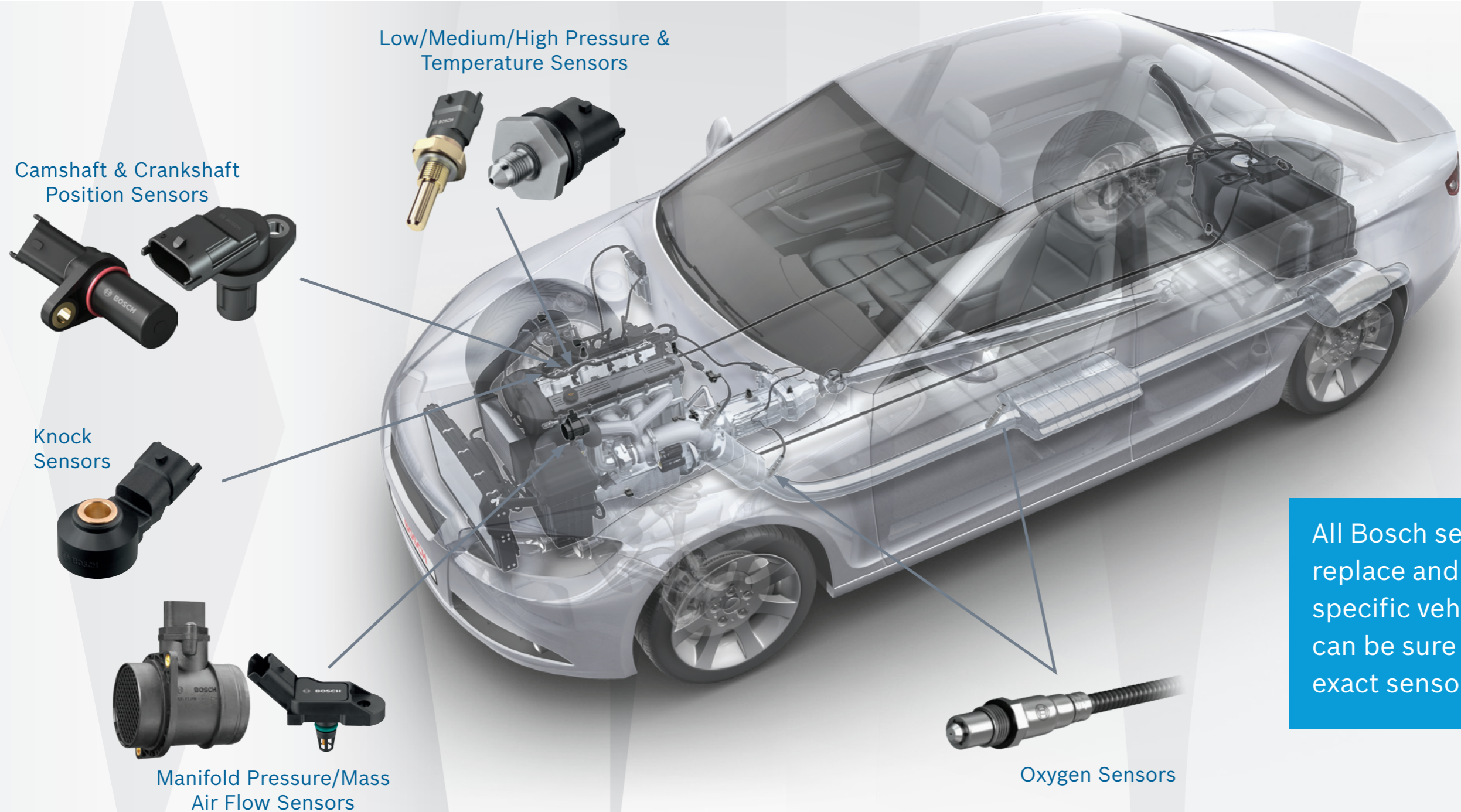
**BOSCH**

Invented for life

# Bosch Engine Management Sensors

Automobiles are providing customers with safety, driver assistance and convenience features – along with improved power, efficiency and reliability. These automotive technologies are driving an increase in the number of sensors in each vehicle. On a compact-class vehicle, there can be over 60 sensors installed – and because sensors are a wearing part, this presents a business opportunity for today's shops.

From engine management to safety systems, Bosch offers a comprehensive range of sensors to the aftermarket that are built to the same Original Equipment (OE) specifications as those produced for vehicle manufacturers.



All Bosch sensors are easy to replace and are optimized to specific vehicle models, so you can be sure you will receive the exact sensors you need.

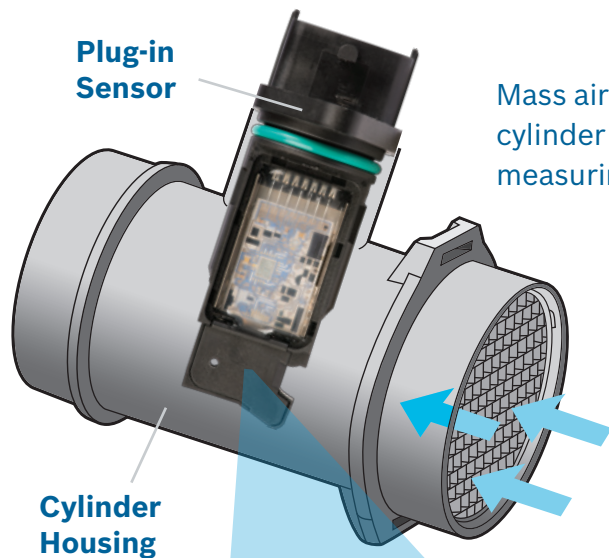
# Bosch Mass Air Flow Sensors with Hot-film Technology

Bosch Mass Air Flow (MAF) Sensors are precision engineered, tested to OE specifications and developed in conjunction with vehicle manufacturers. This guarantees that they meet vehicle requirements for performance, drivability, fuel economy and emissions.

Using hot-film technology to measure the engine's air intake, Bosch MAF Sensors provide

- ▶ Low levels of harmful emissions
- ▶ Greater fuel efficiency
- ▶ Improved engine performance

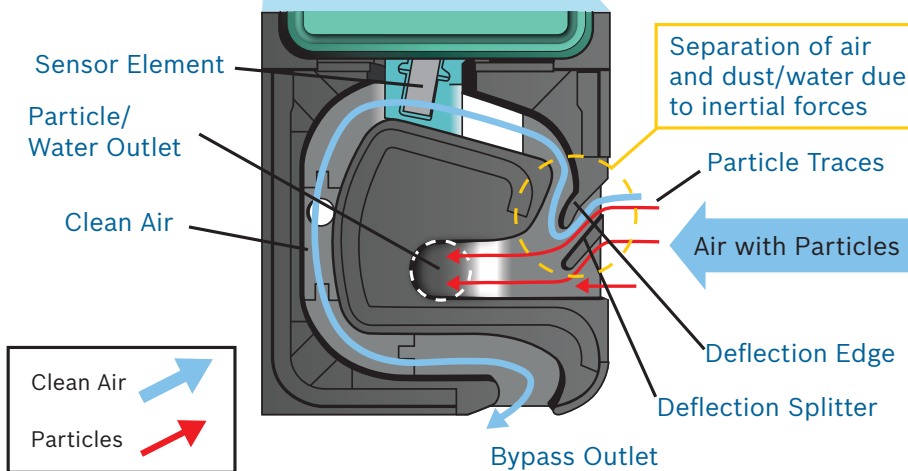
Bosch supplies each sensor calibrated for a specific cylinder housing size to achieve accurate tolerances for proper engine performance.



Mass air flow sensors include a sensor element inserted into a cylinder housing. Each housing is designed to meet the required measuring range and air throughput.

## Installation of a sensor in the wrong housing can result in

- ▶ Reduced engine power
- ▶ Higher fuel consumption
- ▶ Failed emissions tests



## Bosch Patented Design

### HFM7-ID

(Integrated Deflection Bypass)

HFM7 is the newest MAF Sensor product family from Bosch. In addition to having the latest film technology, it has an integrated deflection bypass.

#### This Bosch patented design

- ▶ Increases robustness against water and particulate contamination
- ▶ Reduces drift over lifetime
- ▶ Lowers pressure drop

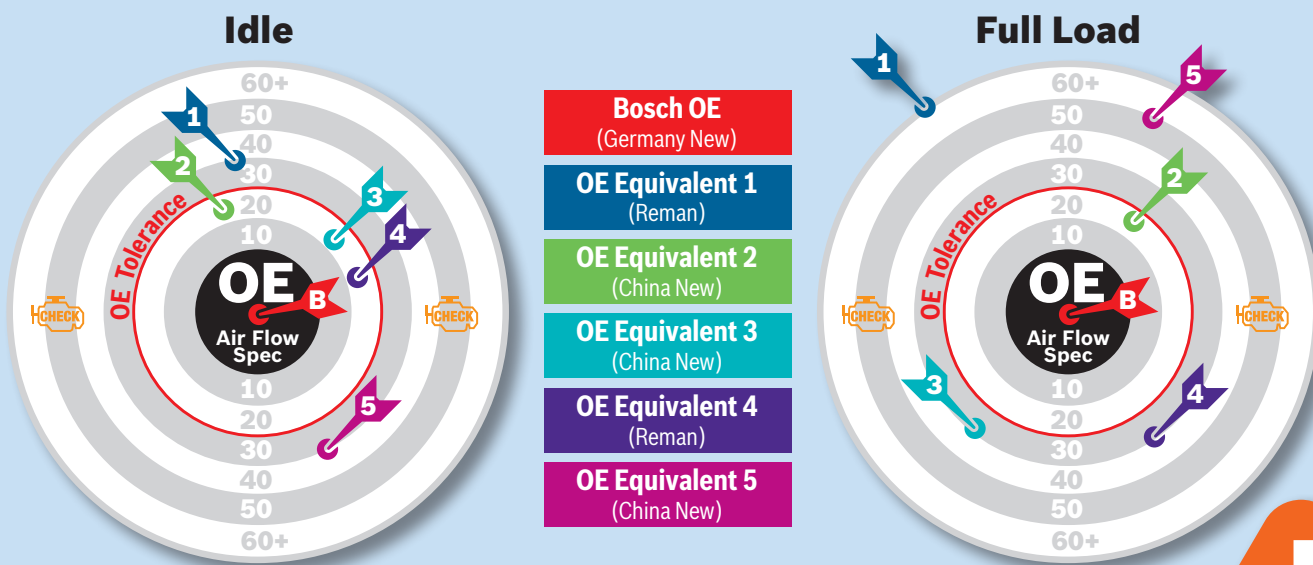


# Bosch MAF Sensors

## Features & Benefits

- ▶ Accurate air flow measurement for efficient engine performance
- ▶ OE technology ensures correct function and calibration for trouble-free operation
- ▶ Guaranteed to meet vehicle requirements for performance, drivability, fuel economy and emissions

## OE Airflow Spec Comparison



Deviations of greater than 20% from OE spec can result in:

- ▶ Poor Fuel Economy
- ▶ Increased Emissions
- ▶ Check Engine Light



The Bosch MAF Sensor program includes over **110 part numbers** covering more than **10.8 million vehicles** in operation, including Domestic, European and Asian applications.



# What drives you, drives us.

The Automotive Aftermarket division provides the aftermarket and repair shops worldwide with a complete range of diagnostic and repair shop equipment and a wide range of spare parts – from new and exchange parts to repair solutions – for passenger cars and commercial vehicles. Its product portfolio includes products made as Bosch original equipment, as well as aftermarket products and services developed and manufactured in-house.



Ask us about our *Point-of-Sale* materials.



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