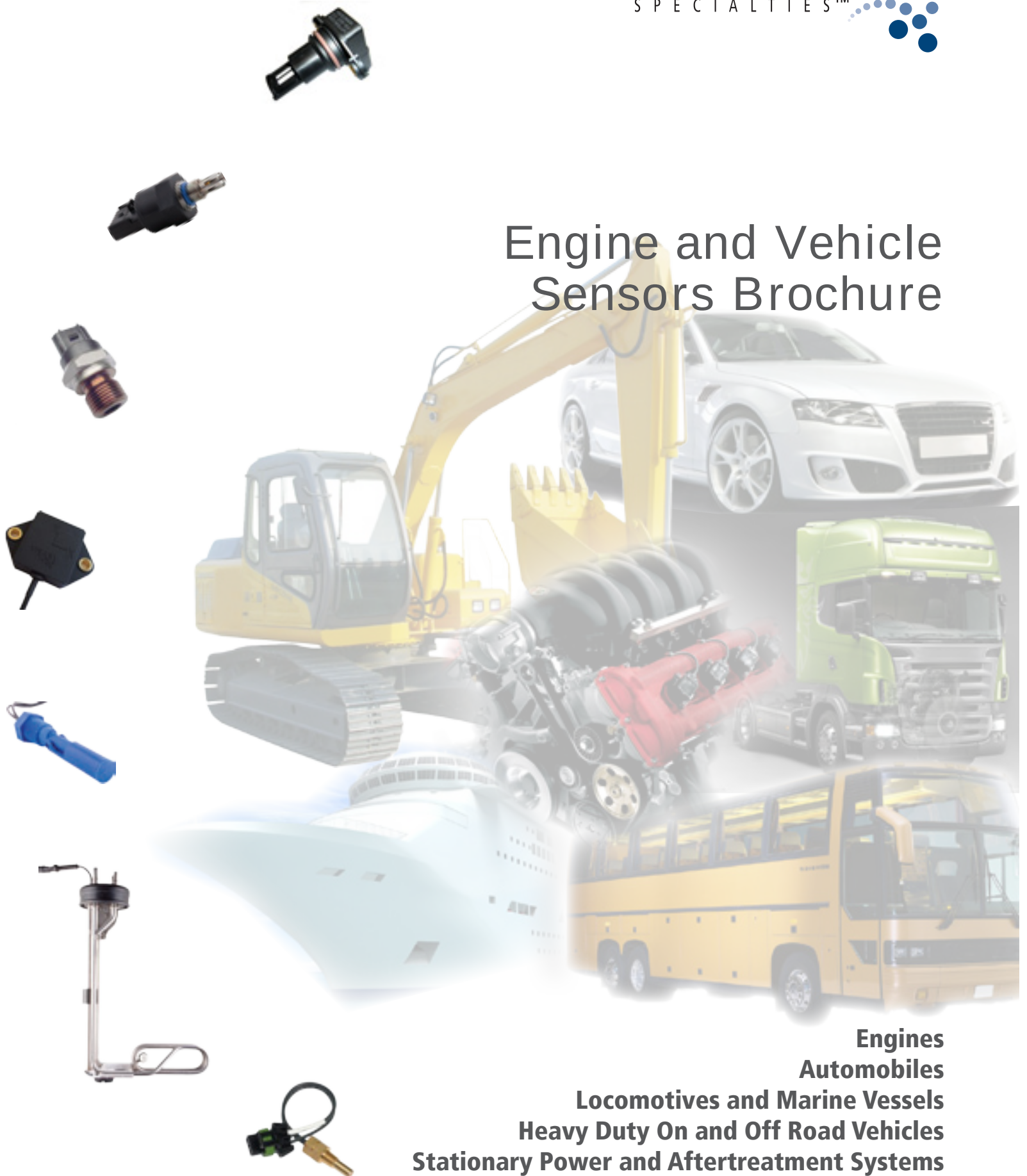


Engine and Vehicle Sensors Brochure



Engines
Automobiles
Locomotives and Marine Vessels
Heavy Duty On and Off Road Vehicles
Stationary Power and Aftertreatment Systems



Measurement Specialties Knows How to Support Engine and Vehicle OEMs

Measurement Specialties (MEAS) designs and manufactures sensors that measure humidity, fluid properties, pressure, force, position, flow, level, vibration and temperature. Our sensor offerings include fully integrated stand alone sensors for direct application and use by Engine and Vehicle OEMs or embedded sensors for integration by Tier I and Tier II suppliers to support the needs of Engine and Vehicle OEMs. Our sensors provide critical feedback that enables enhanced engine and vehicle control, performance and safe operation.

Our sensors often play mission critical roles within the end device in which they are embedded. Accordingly, our customers rely on MEAS sensors to operate accurately, every time. At MEAS, we place the highest emphasis on quality in terms of design standards, process control and customer feedback/integration and back up our products with an industry leading warranty.

MEAS maintains the highest quality certifications, including:

Quality Statements:

- ◇ AS/EN 9100
- ◇ ATEX
- ◇ ATEX 949EC
- ◇ CE-MDD
- ◇ CMDR – Health Canada
- ◇ EN 13980
- ◇ ESA 266
- ◇ ESCC266E
- ◇ ESCC 400C
- ◇ FDA
- ◇ ISO 13485
- ◇ ISO 14001
- ◇ ISO 9001
- ◇ MID
- ◇ Measuring Instruments Directive 2004/22/EC annex D
- ◇ NASA Qualified
- ◇ NSF-61 Water Quality
- ◇ PART21G
- ◇ TS 16949

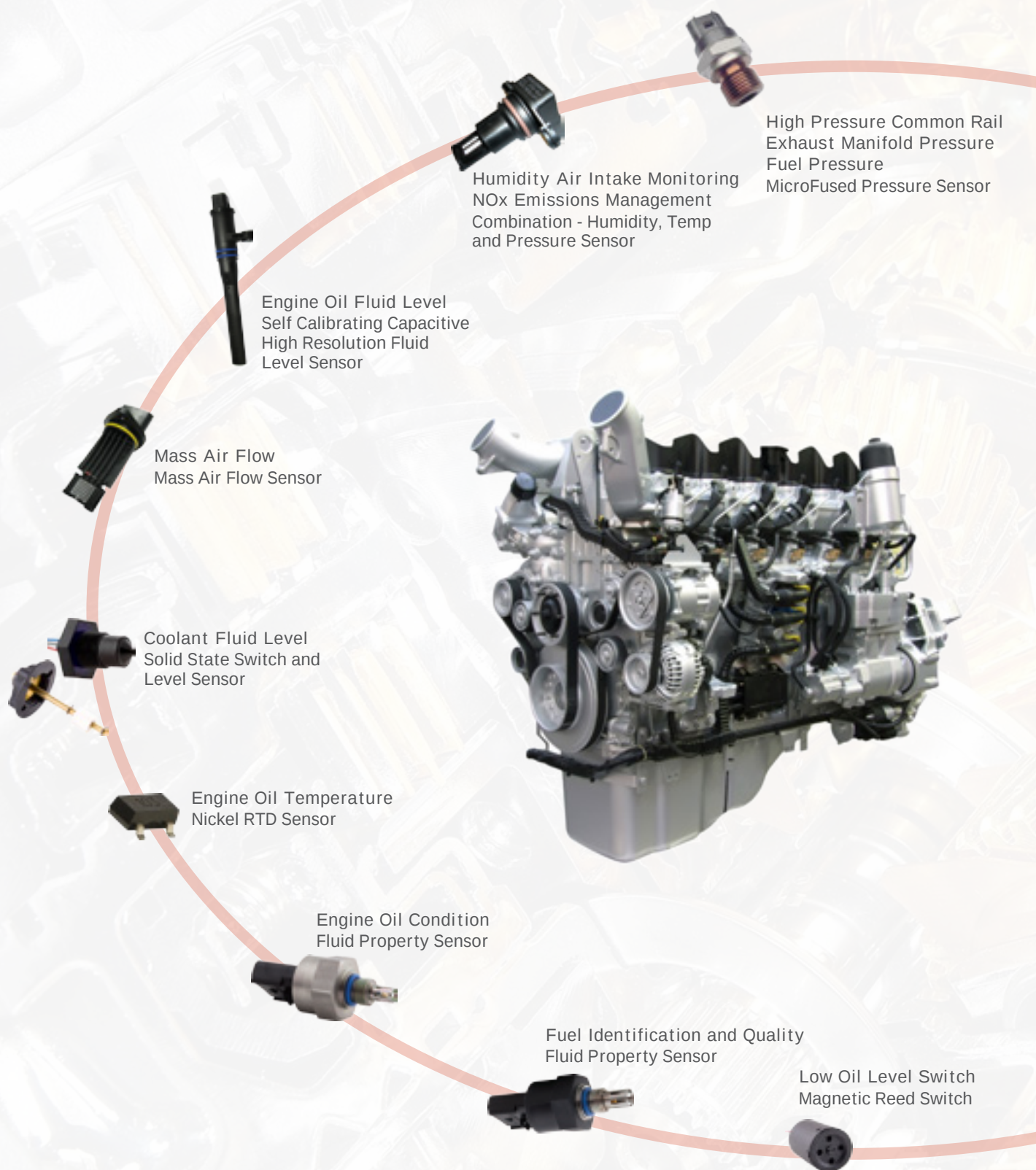
MEAS is a recognized expert in the design and development of sensors to meet the unique and demanding needs of Engine and Vehicle OEMs. We offer sensors that range from “off the shelf” sensors to semi-custom to fully customized sensors. Our portfolio includes technologies capable of measuring most physical characteristics and allows us to design the right sensor for the right application, including multi-parameter sensors. Physical property, electrical input/output and packaged configuration are all considerations when developing products that meet our customers' needs.

We have expanded our technology portfolio and geographic reach in part, through the acquisition of strategically complementary companies. Our operations in the US, Europe and China provide resources close to our customers. This global footprint allows us to offer the lowest cost of ownership to OEMs.

Our business is understanding your sensing needs and developing a solution that meets your performance and cost objectives. At MEAS, we are Sensing Your World.

Engine Management Sensors

The demands placed on modern engines to provide maximum performance and fuel economy coupled with drive to reduce emissions requires an increasing number of sensors to monitor and help manage engine operation. Measurement Specialties offers a substantial portfolio of sensors to help OEMs meet these demands. Our sensors perform under the extreme temperature, vibration, shock, durability and performance profiles required by heavy duty on and off road vehicles and automobiles.



Aftertreatment System Sensors

The aftertreatment strategies and systems required to support the persistent regulatory demand to reduce engine emissions require a diverse range of sensors. Our aftertreatment portfolio includes sensors that measure high temperature exhaust gas and the heating, level, temperature, pressure, quality and concentration measurement of diesel exhaust fluid (DEF). Measurement Specialties provides OEMs with both standard and customized sensor solutions to support their aftertreatment system design.



Integrated DEF Tank Level, Heating, Temperature and Quality Magnetic Reed Switch (Level) and Spectral (Quality)

DEF Quality Universal In-Line Fluid Property Sensor



DEF Quality DEF Pump Dosing Line Integration (Bosch Denoxtronic® Pump Compatible) Fluid Property Sensor



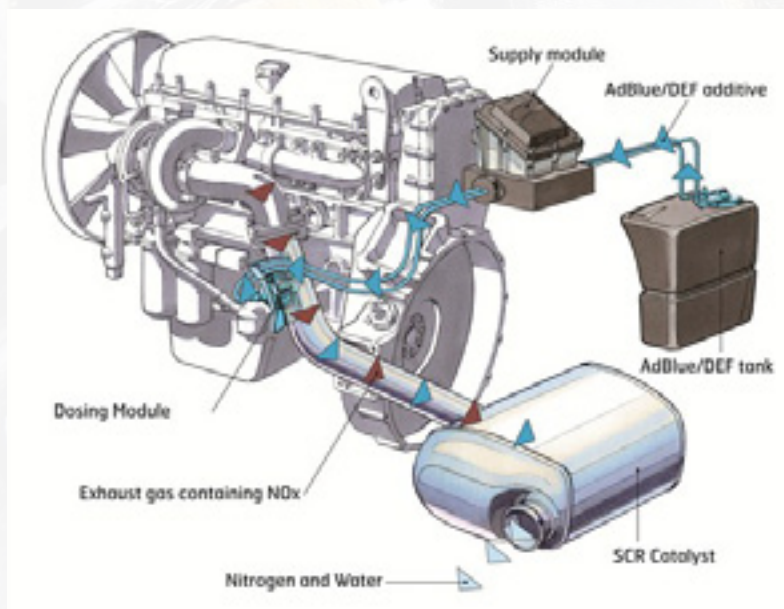
DEF Temperature DEF Tank or DEF Pump NTC and TC Sensor



DEF Pressure DEF Tank or DEF Pump Media Isolated Pressure Sensor



High Temperature Exhaust Gas Exhaust, DOC, DPF, SCR Locations Thermocouple and RTD Sensor



DEF = Diesel Exhaust Fluid (e.g., AdBlue®)

Vehicle Control and Management Sensors

While safety comes first in heavy duty on and off road vehicle operation, the performance demands by customers to increase productivity and minimize vehicle downtime are driving OEMs to utilize more sensors to achieve all of these important goals. Measurement Specialties' diverse portfolio of vehicle control and management sensors helps vehicles operate safely, increase productivity and maximize vehicle uptime.



Cabin & Occupant Safety Sensors

Heavy duty on and off road vehicle operators are exposed to a broad range of challenging conditions ranging from long haul on road trucking to extreme weather and terrain experiences in off road applications like construction, mining, forestry and agricultural. Measurement Specialties' sensors help OEMs provide their customers with safe and efficient operating environments for their vehicles.



Automobile Sensors

Measurement Specialties is a major designer and manufacturer of advanced sensors whose core elements are used as embedded devices by Tier I and Tier II sensor providers to automobile OEMs. In addition to the stand alone sensors we provide to the on and off road OEMs, we manufacture many millions of embedded devices for suppliers to the automobile industry. Yet, we are also an important Tier I manufacturer of humidity sensors for anti-fogging and cabin control and DEF quality sensors to automobile OEMs.



Global Resources

Measurement Specialties has design engineering and manufacturing locations strategically positioned around the globe. We strive to balance fully automated, semi-automated and manual processes in order to operate effectively in both high volume/low mix and low volume/high mix environments. Regardless of the manufacturing location, we manage customer relationships locally – in both language and currency – making MEAS the sensor company of choice for Engine and Vehicle OEMs.



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