



▶▶ INNOVATION INSIDE.



For automotive and industrial leaders whose reputations ride on reliability, Schrader is the valve and sensing technology pioneer that delivers innovative solutions they can trust — because only Schrader provides the *vision, capabilities, engineering strength and collaboration* they need.

▶▶ **SENSORS &
TPMS COMPONENTS**

▶▶ **FLUID CONTROL &
HIGHLY ENGINEERED VALVES**

▶▶ **TIRE HARDWARE,
REPAIR & AIR ACCESSORIES**



THE SCHRADER STORY

INNOVATION IN OUR DNA

For more than 165 years, Schrader has been the world's leading pioneer and innovator of automotive and industrial valve and sensing technologies. Throughout our history, Schrader innovations have provided practical and economical solutions to real world customer needs — precise answers that help thousands of customer applications operate better, safer, and more efficiently.

QUALITY WITH A PURPOSE

At Schrader, quality means defect-free. Quality assurance mechanisms are built into each key stage of our automated manufacturing processes, which are operated by experienced, highly skilled Schrader associates. Schrader quality and innovation are installed within our customers' mission-critical applications, where safety, performance and reliability can never be compromised. As such, each Schrader manufactured product undergoes thorough quality testing before it ever leaves a Schrader facility.

PERFORMANCE "FROM THE INSIDE OUT"

Schrader products deliver the finest operational performance in the most diverse applications. Schrader technology can be found in precision operations embedded within everyday items from automobiles and airplanes, to heavy-duty machinery and equipment. As a result, Schrader products not only improve performance, but in many applications Schrader products also save lives.

GOING THE EXTRA MILE

The original Schrader valve allowed people to go the extra mile. Today, we carry that tradition forward in our day-to-day relationships with our customers. With unmatched onsite and resident engineering, design concept-to-final manufacturing capabilities, and world-class training and technical support, Schrader is with you from the design center to the repair bay, field, laboratory or mine.



Poised for Growth with Leading Design, Engineering, Manufacturing, and Customer Support on Four Continents

Schrader supports our global customer base from **10** Sales & Engineering Support Sites, **5** Technical Development Centers, and **8** Manufacturing Facilities in the United States, United Kingdom, France, Brazil and Asia-Pacific.



SCHRADER TODAY

Schrader is a critical technology partner to the world's leading automotive, aerospace, heavy-duty, industrial, and aftermarket companies. Schrader's customers range in size, global location, and end-market, but the common element is they all trust Schrader products to perform within their specific application.

- ▶ Automotive Original Equipment
- ▶ Industrial Original Equipment
- ▶ Aftermarket Replacement

Building on World-Class Competencies

TIRE PRESSURE MONITORING SYSTEMS ("TPMS")

Today, Schrader is the indisputable global leader in automotive TPMS with a nearly **60%** share of OEM vehicle platforms, and a rapidly growing **35%** share in the Aftermarket. In fact, Schrader manufactured its **200 millionth** sensor in 2012, and the **300 millionth** in 2014. And Schrader's TPMS business will only grow with new TPMS legislative mandates on the horizon in Europe and Asia, and the development of new fitment options and TPMS applications for global Off-the-Road and Truck & Bus segments.

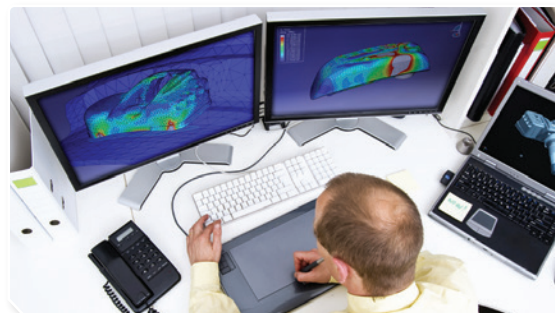
OFF-THE-ROAD ("OTR")

Mining operations, roadway, and large infrastructure projects are growing worldwide. And with the continuing global OTR tire shortage placing operator emphasis on tire maintenance, extended tire life, and application uptime, companies worldwide have made Schrader a leading service provider for earth-moving vehicles and other heavy equipment. Schrader's unique "Everything Around the Wheel" package — including tire repair materials, equipment, TPMS, tire management services, on-site consulting, and training — provides a holistic support program for large off-road vehicle, infrastructure project, and mine operators.

ENGINEERING AND R&D EXCELLENCE

Schrader's growth today is fueled by industry-leading engineering and R&D capabilities. Schrader has a continual history of technological innovation, supported today by our large global base of design engineers and scientists. This technical strength has given Schrader proven capabilities in development of electro-mechanical systems and innovative Radio Frequency ("RF") technologies, as well as unmatched capacity to concept, design, prototype, and manufacture highly-engineered components for thousands of unique applications.

- ▶ 3D Solid Modeling
- ▶ Flow Analysis
- ▶ Radio Frequency Modeling
- ▶ Vibration Testing
- ▶ Pressure & Salt Spray Testing
- ▶ High-Speed Spin Chambers
- ▶ Finite Element Analysis
- ▶ ...and much more



INDUSTRIAL



SCHRADER QUALITY. BUILT IN.

Schrader's brand reputation is built upon a continual dedication to design and manufacturing leadership in sensing, valve and fluid control technology. Our world-class manufacturing processes have been developed to manufacture the latest variants of Schrader's products on high-volume and fully-automated processes, utilizing only the highest quality inputs and state-of-the-art equipment.

The Future Is Now

Schrader is entering an explosive new growth phase. With exciting new technologies and applications, Schrader is enjoying strong growth from both our core automotive applications and from intelligent, cross-industry product extensions. Schrader is rapidly expanding sales and share in markets beyond the automotive industry, including:

- ▶ Industrial
- ▶ Aerospace
- ▶ Agriculture
- ▶ Heavy Equipment / Off-the-Road
- ▶ Oil & Gas

With advanced sensing and valve integration on new design projects and prototypes, Schrader *today* is moving forward faster than ever — better than ever.

Why Schrader Wins

A WORLD-CLASS TEAM LEADS SCHRADER INTO ITS THIRD CENTURY

- ▶ Global base of innovation-focused associates worldwide
- ▶ Strong Management Team with deep experience throughout our key markets
- ▶ Committed to Innovation, Quality, and Safety
- ▶ Presence in more than 50 countries
- ▶ Hundreds of skilled valve, sensor, mechanical, and RF engineers
- ▶ Sales, Support, Technical Development, and Training in all global regions

AEROSPACE



AGRICULTURE



HEAVY EQUIPMENT / OFF-THE-ROAD



OIL & GAS



INNOVATION

MANY COMPANIES TALK ABOUT INNOVATION — SCHRADER DELIVERS.

Every day, Schrader delivers superior engineering, the highest quality, and offers clients unmatched global sales, engineering, manufacturing, and support capabilities.

FROST & SULLIVAN® INDUSTRY RECOGNITION:

- ▶ 2009 Innovation Award (Snap-In Sensors)
- ▶ 2012 Product Leadership Award (EZ-sensor®)
- ▶ 2013 North American Price Performance Value Leadership Award (TPMS for OEM & Aftermarket channels)

NASCAR® RACING

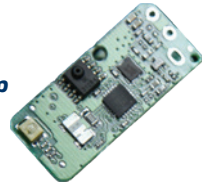
Schrader fuel diagnostic valves are installed within mandatory fuel-injection delivery systems on all NASCAR vehicles.

Driven By Our Values

- CAPABILITY:** Designers, engineers, and sales teams who believe in the power of ideas.
- RELATIONSHIPS:** Building true partnerships and collaboration with all our customers.
- INNOVATION:** Committed to delivering systems that make a true operational difference.
- LEADERSHIP:** Leading by design, reputation, and performance.
- PRIDE IN PRODUCT:** Products that perform the way they should combined with zero-defect quality.
- UNRELENTING SERVICE:** Personal service approach that keeps everyone moving forward.



ASIC Chip



Sensor Body



Sensor Battery



Snap-In Valve



Valve Core



Sealing Cap

SCHRADER TIRE PRESSURE MONITORING SYSTEMS

Schrader engineers invented and perfected TPMS technology for passenger cars, and Schrader holds critical patents on both mechanical and electronic TPMS components, as well as programmable sensors. Today, Schrader has earned nearly **60%** of the OEM TPMS market worldwide, with the **200 millionth** Schrader sensor manufactured in 2012, and the **300 millionth** in 2014. Similarly, Schrader is a one-shop provider of a full range of tools, sensors, service packs, and training for the global TPMS aftermarket.

Schrader engineers have developed unsurpassed expertise in radio frequency and remote sensing technologies, which makes Schrader TPMS technology highly adaptable to diverse industrial applications, as well as non-passenger vehicle applications such as motorcycles, off-the-road vehicles, and truck & bus.

Schrader enjoys a sustainable competitive advantage from its TPMS technology leadership. Vertical integration of design and production allows Schrader to meet the growing demand for integrated electronic and sensing technologies in unique applications. Schrader's complete control over the design, development, and manufacturing of key components results in superior product design, and greater flexibility and speed in responding to evolving customer and market needs.

Schrader Snap-In Sensor

ASIC CHIP: Custom-tailored for specific TPMS application with optimal chip area and power consumption while maximizing programming capabilities.

SENSOR BODY: Unique, light-weight body and proprietary rubber compound.

SENSOR BATTERY: Specialized small battery design.

SNAP-IN VALVE: Proprietary durable brass valve design and snap-in component.

VALVE CORE: Proprietary nickel-plated valve core.

SEALING CAP: Prevents dirt and moisture from entering sensor, and provides a secondary pressure seal.

The TPMS Lifecycle

Schrader offers a full range of solutions for every stage of the TPMS lifecycle:

- ▶▶ **DIRECT TPMS** for the OEM
- ▶▶ **SAFETY** for the Consumer Driver
- ▶▶ **RELIABILITY** for the Aftermarket



UNMATCHED AFTERMARKET SOLUTIONS: THE SCHRADER EZ-SENSOR

- ▶ World's first patented and programmable OEM replacement TPMS sensor
- ▶ 2 sensor types (315 & 433 Mhz) cover approximately 90% of TPMS-equipped vehicles
- ▶ Helps aftermarket retailers eliminate lost sales, simplify TPMS repairs, and dramatically improve fill rates

OFF-THE-ROAD PORTFOLIO

Schrader offers proven solutions for earth moving, construction, and other heavy equipment. With mining operations and large infrastructure projects growing globally, and OTR tire shortages placing premiums on tire life and application uptime, Schrader provides unique solutions including:

- ▶ TPMS kits for earth-moving and heavy-duty vehicles
- ▶ Tools for mounting and dismounting tires
- ▶ Tire repair materials
- ▶ Onsite consulting, shop setup, and training

Engineering & Custom Solutions

"SCHRADER CAN DESIGN, PROTOTYPE, AND MANUFACTURE THAT FOR YOU"

With a history of making major technological innovations, Schrader offers world-class concept, design, prototyping, and manufacturing services for thousands of unique valve and sensing applications. Schrader engineering and design services are uniquely available as on-site, resident engineering, as well as through dedicated Schrader Technical Design Centers in every global region. The proven Schrader development process ensures high-quality products that meet or exceed the most exacting requirements in every application.

Schrader engineers offer unmatched R&D expertise in sensing, valve, and fluid control systems for applications as diverse as environmentally-focused air conditioning valves, TPMS for Off-the-Road vehicles, monitoring for power transmission belts and fluid hose operations, fuel-level and urea sensing applications, pressure relief and other unique valve types. Schrader's vertically integrated R&D and manufacturing process enables the most rapid development of new technologies and applications, and the capacity to quickly and efficiently develop innovative custom products for our global customers.



SCHRADER MARKET-DRIVEN SOLUTIONS

In use today in mission-critical applications across the most diverse sectors and industries:

AUTOMOTIVE

- ▶ TPMS valves, sensors, service packs and tools
- ▶ Fuel and liquid level sensors
- ▶ Engine, air conditioning, compressor, shock absorber and scroll valve types
- ▶ Hybrid / Electric vehicle components

AERONAUTICS

- ▶ Pressure relief valves
- ▶ High-pressure valves for landing gear
- ▶ Over-pressure burst valves
- ▶ Security check valves

HEAVY DUTY/OFF ROAD

- ▶ TPMS kits for OTR segment
- ▶ Tire repair materials and equipment
- ▶ Large bore and clamp-in tire valves
- ▶ High Pressure Valves

MANUFACTURING & PRODUCTION

- ▶ Power transmission belt and fluid hose monitoring
- ▶ Burst valve devices
- ▶ CO2 sub- and trans-critical products
- ▶ High-pressure valves and quick connectors

