



**KONGSBERG**  
AUTOMOTIVE

# Setting a New Direction

STEERING SYSTEMS



## System Advantages:

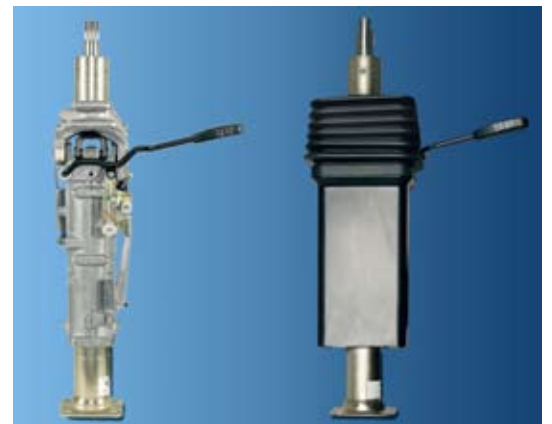
- A comprehensive range of features to meet OEM requirements and add value to their products
- Short launch and modification lead-times
- Low capital and design investment
- State-of-the-art production capabilities
- Full in-house test and validation capabilities
- Highly experienced engineering team
- Steering Column Products:
  - Fixed
  - Tilt
  - Telescope
  - Tilt & Telescope

## EXPERIENCE AND EXPERTISE

Kongsberg Automotive is one of the world's leading suppliers of modular and custom engineered steering systems for off-highway vehicles. Our steering systems are in use today in a wide range of agricultural, material handling and construction vehicles manufactured by market leaders across Europe and North America.

The Kongsberg Automotive modular system ensures flexible and efficient solutions for an unlimited number of applications, with easy adjustment to provide maximum ergonomic driver comfort.

Every Kongsberg Automotive steering system is designed, developed, validated and manufactured to meet the demands and expectations of our global customer base. From tilt and telescope columns, with a comprehensive range of best-in-class features, to basic fixed position columns, our steering systems ensure outstanding functionality and steering precision.



## SERVICE AND COMMITMENT

Kongsberg Automotive has more than 20 years' experience designing and manufacturing premium steering systems and supplying some of the most successful and innovative vehicle manufacturers in the world.

Kongsberg Automotive Steering Systems are designed and developed at our Engineering Center of Excellence near Göteborg, Sweden, and distributed to customers throughout the world.

We have the capability and resources to support our key global customers wherever and whenever required and to provide steering solutions to maximize vehicle performance.



#### Features:

- Innovative modular high specification designs with a variety of options including:
  - Variable length
  - Variable tilt position and angle
  - Single lever or pedal activation of tilt and telescope control
  - Custom features
- Easily packaged into the driver cabin
- Fully developed, tooled and tested
- Component commonality for optimized tooling and manufacturing efficiency
- Endorsed by major OEMs across Europe and North America

#### MODULAR SYSTEMS

Kongsberg Automotive steering systems offer a standard range of columns which provide features and dimensions suitable for many applications, but can also accommodate custom design requirements.

Kongsberg Automotive steering columns are modular products that can be tailored to precisely meet the specific requirements for every vehicle.

OEMs can choose from a fixed length, fixed position column, to a column which telescopes and tilts in both upper and lower positions, and incorporates a range of additional features from brackets and isolation mounts, to travel controls and indicator switches. Whatever the requirement, we have a solution.





## KONGSBERG AUTOMOTIVE

Kongsberg Automotive is a global provider of engineering, design, and manufacturing for seat comfort, driver and motion control systems, fluid assemblies, and industrial driver interface products. We are focused on automotive, commercial vehicle and industrial markets. Headquartered in Kongsberg, Norway, Kongsberg Automotive has nearly 50 facilities in 19 countries. With revenues of MEUR 623 (2009) and about 9,000 employees, Kongsberg Automotive provides system solutions to vehicle makers around the world.



## DRIVELINE

Our vision is to be our customers' preferred choice for driver controls in the global light vehicle automotive market. A Tier 1 global supplier of custom-engineered cable controls and complete shift systems, we are world leaders in both control cables and shifter systems for our customers around the world. Our global resources ensure timely innovative product development and high quality manufacturing.



## INTERIOR

Kongsberg Automotive is a global leader in the design, development and manufacture of mechanical and electromechanical light-duty motion comfort and seat comfort systems to Tier 1 and Tier 2 customers. Our product portfolio includes seat adjusters, seat recline, side bolsters and lumbar support (pneumatic/mechanical), cables, seat heating, ventilation and massage systems, arm rest and head restraints, as well as other interior actuation systems.



## POWER PRODUCTS

Kongsberg Automotive Power Products is a global leader in the design, manufacture and supply of vehicle control systems, providing quality engineered pedal and steering systems, electronic displays, cable and hand controls that set the standard for the world's foremost manufacturers of commercial, industrial, agricultural and construction vehicles. We offer a product range that is unmatched in the market.



## ACTUATION & CHASSIS

A global developer and manufacturer of operator control systems for industrial vehicle markets, Kongsberg Automotive offers a robust product portfolio with products that range from traditional mechanical linkages to servo-assisted hydraulic systems and manual and electronic cable shift systems. These modular systems enhance flexibility and ensure cost-effective adaptation to customers' needs.

## FLUID TRANSFER

Kongsberg Automotive fluid handling systems serve a wide range of fluid assembly customers in the light duty, industrial and commercial vehicle markets. Products include pipe/hose assemblies for turbo chargers, brake and fuel systems, and air system couplings.

