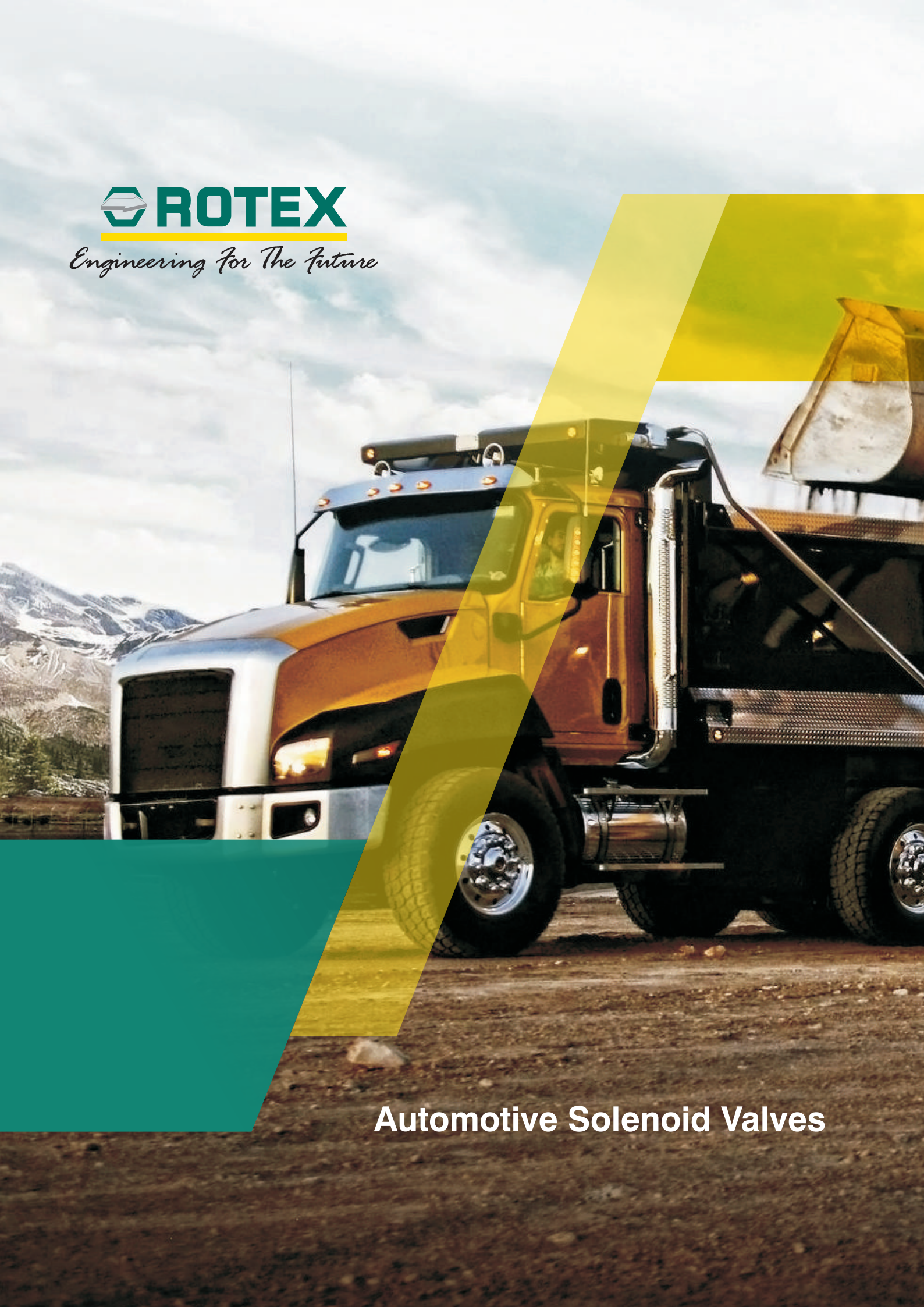




Engineering For The Future



Automotive Solenoid Valves

Introduction

Rotex was founded by Late Mr. Jitendra G Shah in 1967 at modest manufacturing set up near Mumbai, India that was involved in manufacturing of textile machinery. His passion for technology eventually made him observe that all industries rely on power of the fluids like air, gases, water, fuels and oils etc. to control their processes and operations. It was all about how efficiently you could control and utilize the power of these fluids. This motivated his entrepreneurship to venture into the industry that is involved in efficient control of fluids. He decided set up a business that was involved in designing and manufacturing solenoid valves. Today Rotex not just pioneers Solenoid valve technology in India but is also a market leader serving to specialized needs of Industrial segment, Railways, Aerospace, Defense & Nuclear Power and Automotive sectors. Here we stand today with our motto to offer **“Engineering For the Future”**



To the automotive world we offer solutions that help increase efficiency, eliminates waste, reduces pollution and improvise safety and comfort. Our product line includes several solutions for Powertrain, After-treatment systems, Tipping, Air suspension and Thermal management systems in all kind of vehicles.

Customer needs are centric to everything that we do at Rotex and our customer benefit from our collaborative approach. Several decades of application engineering knowhow, our spirit of innovation and our collaborative work with customers for all aspects of development and supply are another reasons that our customer look up to us repeatedly

Technical Capability

Media Capability: All Automotive fluids
(Air, Fuel, Coolant, Adblue, Oil,
Water, Exhaust gases)

Ingress Protection: up to IP6K9K
Vibrations: up to 20G
Mechanical Shocks: up to 52G

Operating Pressure: Vacuum to 400 bar

Leak Tightness
Leak rate: < 1 mm³/sec of H₂ @ 10bar

Cleanliness Level: Class A as per ISO 16232

Thermal Range -40 °C to 125 °C

Valve Operation & Control
ON/OFF Type or PWM Control

R&D Set up

Team of 20 qualified engineers for
designing and simulation activities

Built to Concept
Built to Specification
Built to Print

More than 6000 types of valves
development and have registered 12
Patents

Softwares
2D: SolidWorks
3D SolidWorks
CAE: ANSYS
Simulation : CFD, Mechanical,
Electromagnetic field

Customized proprietary software for
O-ring selection, Spring design and No.
of Copper turns in Solenoids

Extensive set up for quick prototyping
and validation lab

Validation Lab

Thermal Cycling
Thermal Shocks
Humidity chambers
Life Cycle Monitoring

Flow testing
Response time checks
Helium Leak testing

Burst test
Ingress Test
Salt spray test



Manufacturing set up

State of the Art Solenoid Winding facility with close loop feedback for No. of Turns and tension of wires

Vertical Moulding of solenoid and optional Epoxy Potting

Clean Room set up complimented with High pressure /Ultrasonic washing and Millipore lab

Semi automated Assembly lines extensively error proofed with use of feedback torque guns, vision sensors, auto rotating and locking fixture ensuring 100% correct process

Fully automated – End-Of Line testing. End to end traceability

Integrated Management System

QMS : AS 9100 D / IATF 16949 / EMS : ISO 14001 : 2015 / Safety : OHSAS 18001 : 2007



Customers



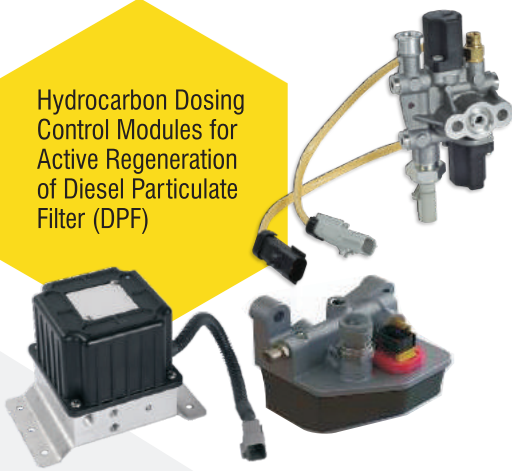
DAIMLER

DORMAN



Emission After treatment System

Hydrocarbon Dosing Control Modules for Active Regeneration of Diesel Particulate Filter (DPF)



Air Purging Valve for DPF Fuel line & Adblue line



Coolant valve of Adblue Thermal Management



ROTEX

Engineering For The Future

Tipping and Transmission

Grade shifting valve for manual transmission



AMT Control Valve Units



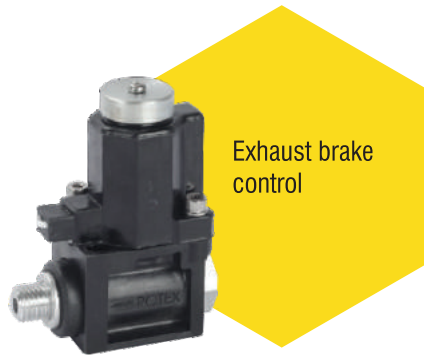
PTO-Shifting Solenoid Valve



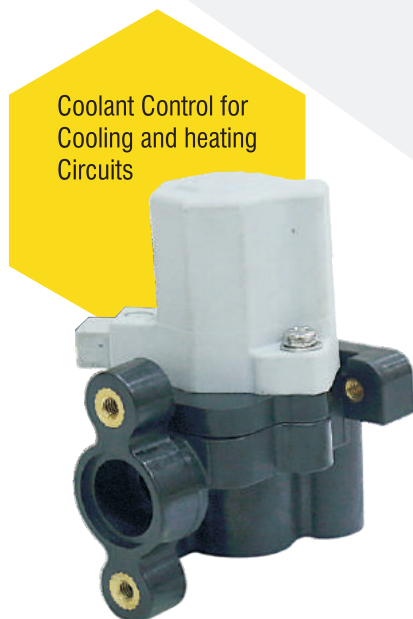
Cabin Control for Tipping



Engine and Fuel System



Thermal Management / HVAC



Suspension / Air management

Solenoid Valve for Air Suspension



Lift axle control



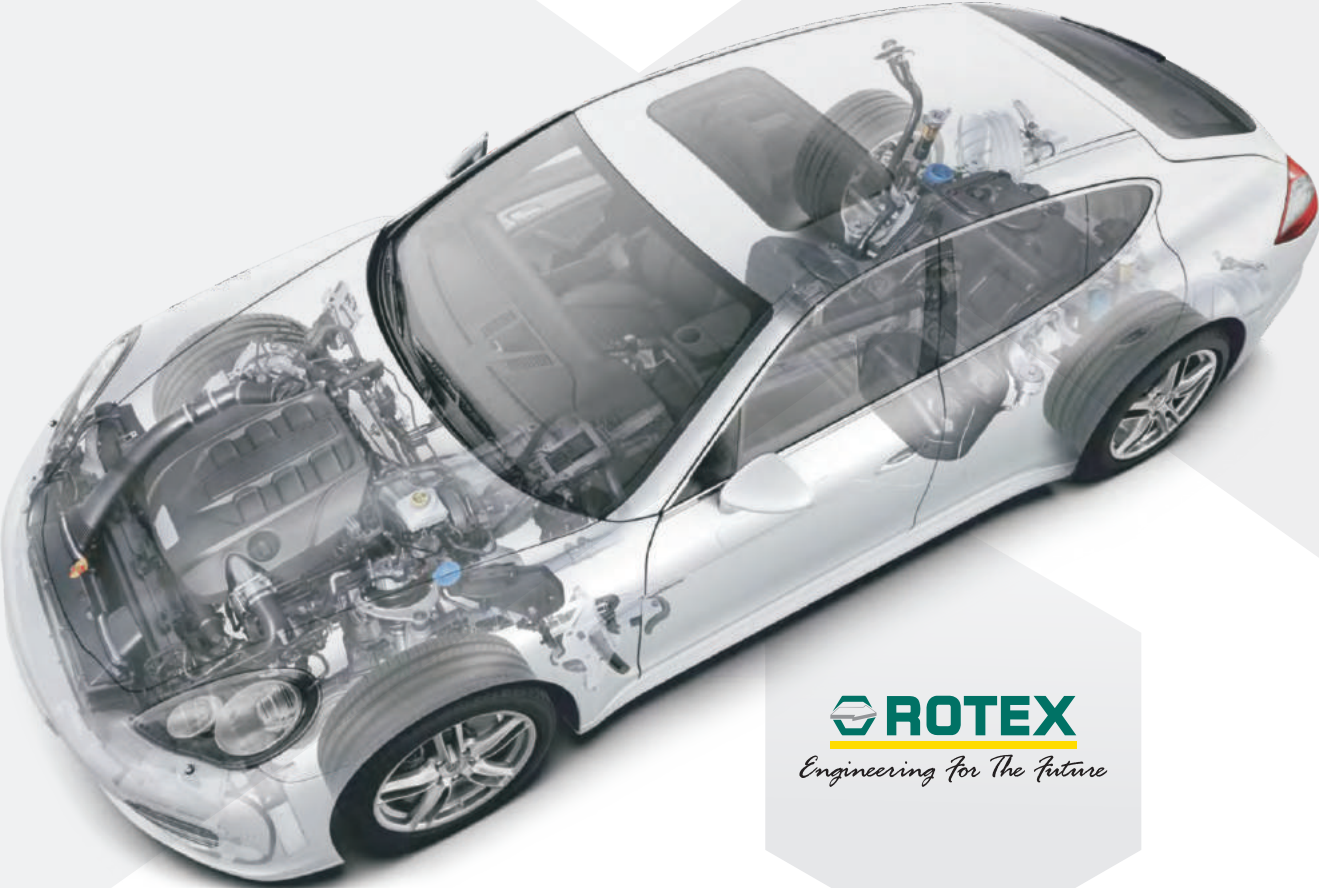
Electronic Control Air Suspension Module



Manifold / Valve array Air management



Height Control for Suspension seating systems





Engineering For The Future

Rotex Automation Limited:

987/11 GIDC Makarpura, Vadodara - 390 010, Gujrat, INDIA.

+91 265 6174100 | rotexauto@rotexautomation.com | www.rotexautomation.com