FREUDENBERG SEALING TECHNOLOGIES

Company presentation

Bursa, July 25th 2015
The guiding theme of Freudenberg Sealing Technologies accurately describes the characteristics of our 80,000 sealing solutions. Seals are largely hidden and fulfill their functions in the background, for the most part under extreme conditions. Even if they are not visible, they are indispensable to the whole undertaking.

„At Freudenberg, quality, internationalism and innovation are a tradition.“
Sealing solutions for all industries

AUTOMOTIVE

GENERAL INDUSTRY

FLUID TECHNOLOGIES

HEAVY INDUSTRY

INDUSTRIAL APPLICATIONS

MOBILE MACHINERY

MOBILITY

POWER

PROCESS INDUSTRY

DISTRIBUTION
Automotive

Priority for the automobile – LESS is more

We produce added value for our customers, making it possible for them to achieve their goals

- Market leader in technology, quality and service in the automotive field for all leading automakers
- Comprehensive product portfolio ranging from complete solutions to those meeting specific needs within the automotive field, including those for electric and hybrid powertrains
- Meets the highest demands of the global auto industry for operating life, reliability and technological and logistical know-how
- „LESS” product initiative offers solutions to increase efficiency and reduce emissions
- Ongoing R&D on the Levitex product innovation
- Corteco – replacement parts with original equipment quality for the global, independent replacement parts market
General industry

The reliable partner in the industrial business

Harvesters, washing machines, airplanes, wind turbines, and dental drills have one thing in common: Advanced sealing technology from Freudenberg Sealing Technologies!

- An extremely broad portfolio of solutions and materials
- Applications know-how: We know-how a seal has to bear up in your application
- Dense service network and flexible repair solutions for reduced downtime
- Nearly all certifications are met
Heavy industry

Product portfolio for heavyweights

Competence, technology and passion produce seals that can be relied on.

- Seals even in extreme dimensions
- Individualized design and production for special applications
- Long-lasting, functionally reliable products for extreme conditions and requirements
- Fast and flexible
- Wide-ranging lineup of materials and solutions for all applications
- Quality assurance through FEM analyses, simulations and test-facility trials
Fluid technologies

Smart solutions for maximum sealing performance

There are unlimited possibilities. But we will find the ideal solution for you.

- Innovative solutions for hydraulic, pneumatic and fluid applications
- Comprehensive lab tests for the company’s oil and hydraulic seals
- Globally certified and fulfill the requirements of a variety of industries
- High-performance sealing solutions for applications at high temperatures and pressures
- Ongoing materials development for demanding operating environments
Industrial applications

Meeting varied challenges reliably

In fields where everything depends on security and cleanliness, seals determine the functionality of the entire system.

- Seals from Freudenberg Sealing Technologies fill important functions in daily life
- Sealing solutions for coffee makers, tooling machines, medical devices, safety equipment, all the way to oil and gas extraction
- From O-rings to diaphragms to two-component seals – the right solution for each application
- Industry-leading material and product know-how
- All the required certifications for the safety and medical areas
- Our material and design expertise provides absolutely reliable functioning even in difficult situations
Mobile machinery

Delicate solutions for harsh environments

Our customers work day after day in nature – and we keep the dirt out of their equipment

- Ideal solutions for functional security and cost-effectiveness
- World’s largest assortment of products
- CTI (Central Tire Inflation) seal to meet the toughest requirements out in the fields or off-road
- Hydraulic suspension systems for farm and construction equipment with hydraulic accumulators from Freudenberg Sealing Technologies increase comfort and safety
Mobility

Your partner on every path

Ensuring flexibility even at high temperatures – our performance is as stable as a rock

- Excellent frictional characteristics for significant potential savings on operating materials
- Sealing portfolio for extreme temperatures, major performance requirements and high safety standards
- Resistant to high temperatures and speeds
- Reliable protection against all media
- Absolute quality and reliability
Power

Always in motion

*We are making a contribution to solving the puzzle of the energy supply of the future.*

- Sealing solutions for motors, powertrain technology and energy supplies
- Reduced friction and high efficiency in conversion processes
- Resistant to the harshest environmental conditions and aggressive media
- Long operating life and high reliability
Distribution

A local service partner for international availability

We are not driven by shareholders. Our priority is the satisfaction of our customers.

- Added value through closeness to customers
- Globally unique product lineup
- Exclusive service performance
- Increase in machine uptime thanks to the highest possible quality standards for products and services
- Customer-specific product solutions due to Freudenberg’s engineering performance and materials expertise
- Well-founded consultations tapping into knowledge of global and local market requirements
- High delivery reliability, secure supply chain management
Process industry

Completely to the industry’s tastes

Competence, technology and passion produce seals that can be relied on

- Germ-free and taste-neutral – sealing solutions based on Hygienic Design
- Unique materials expertise for use in the pharmaceutical, food and chemical industries
- Products and services meeting the processing industry’s needs from the standpoint of hygienic technology
- Analyzed formulations and several hundred individual measurement data in the FST resistance database
- Fulfillment of American and European certifications:
  - Drinking water approval
  - Pharmaceutical industry: USP Class VI
Innovation history

A living tradition
Freudenberg Group

The company

- Globally active corporate group
- 165 years of company history
- 11 business groups and various industries and markets
- 34,030 employees in about 60 countries
- World’s third-largest consumer of rubber (comes in at No. 1 with partner NOK)

Our principles

- Decentralized management culture
- Financial stability
- Creation of added value for customers
- Innovation leadership
- Shaping the future sustainably

Sealing and vibration control technology
Employees: 27,067
Revenue*: 4,0 mrd. €

Nonwovens and filtration
Employees: 5,994
Revenue*: 1,2 mrd. €

Household products
Employees: 2,880
Revenue*: 0,7 mrd. €

Specialties and other
Employees: 4,515
Revenue*: 1,1 mrd. €

* Including internal company revenue
Freudenberg Group

More than 165 years of company tradition

These principles form the basis for entrepreneurial action at Freudenberg

- Close to the customer
- Innovation
- Leadership
- People
- Responsibility
- Long-term orientation
Often invisible, always essential

Visit us at www.fst.com
FST Bursa Key Figures

- 2003 Foundation of Beta Seals as apart from Beltan Vibracoustic J/V of Freudenberg & Coşkunöz
- 2013 Betaseals 100% merged by FST
- Total Employee 124
- 2,500 m² Production Area
- Partner Production of FST for Bearing Seals & Encoder
Core Competence

• **Today**
  
  • Vulcanization in CM and TM technology
    
    • CM Range (OD 30 mm to 204 mm), Mild steel
    
    • TM Range (OD 30 mm to 130 mm), Mild steel / high-carbon steel

  • Rubber / Metal Bonding

  • Post curing

  • Various Finishing Processes
    
    (Leakage Tests, Wear Sleeve Assembly, Precise Greasing)

  • Compounds: FKM, NBR, HNBR and ACM

• **2015..**

• IM technology
  
  • Encoder Production

  • RSS & Combi Production
New Bursa Plant

SOP 2016 Feb
5,000 m² Production
PP Encoder/ RSS
1,500 m² Distribution Center
Regional FST W/House

New Highway shortens the distance to Bursa 1,5 hours in 2017