



Ensuring  
your safety  
through  
technology

# Suspension & vibration control



RELIABILITY  
**TECHNOLOGY**  
**MTC strenghts**  
 SAFETY  
 LIFE CYCLE  
 ENVIRONMENT  
 CARE  
 INNOVATION  
 COMFORT  
 EASY  
 MAINTENANCE

# Your safety and confort worldwide

**PROVIDING SUSPENSION SYSTEMS FOR ALL KIND OF ROLLING STOCK**

- High-speed
- Commuter (regional/intercity)
- Urban (metro, tram, low-floor)
- Locomotives
- Freight

## MTC COMPANY PROFILE

MTC is specialized in the design and manufacture of rubber-metal suspension systems for the railway sector.

MTC is part of Wabtec Corporation, and currently has production plants in Spain (HQ), China, India and US.

Leading company in this sector, MTC works with the main manufacturers of rolling stock. Also has earned the trust of Operators for the supply of spare parts for maintenance of their projects.

MTC main products are primary and secondary suspensions and different subsystems for bogies.



**+100**  
 NEW DEVELOPMENTS  
 PER YEAR

### MTC ADDED VALUE

MTC has developed special designs to adapt to the needs of its customers for special applications:

- Rubber compliant with EN45545 fire and smoke standard
- Extend part life (increase maintenance periods).
- Suspension systems for extreme environments :
  - Low temperatures -50°C
  - High temperatures +80°C
  - Sand impact





# Designing together the suspensions of the future



## YOUR SUSPENSION ENGINEERING DEPARTMENT

MTC supports on the development phase of your bogie design, sharing its engineering department experience. From complex systems calculations (FEA) to re-engineering of existing parts.

# Design and Engineering



**SPECIALIZATION  
IN RAILWAY  
IS OUR COMPETITIVE  
ADVANTAGE.**

MTC can perform complete bogie suspension system calculations, supporting our customers, rolling stock constructors and operators, in the definition of the best suspension solutions.

- **Development based on:**  
FEM by MARC/MATLAB tools  
Wolher curve analyse  
Damage calculations  
Field experience
- **Test facilities:**  
Fatigue  
Creep tests  
Climatic chamber  
Mechanical characteristics
- **Capability to test your fleet: design improvement**



## MTC COMPETENCES

RUBBER FORMULATIONS

PATENTED SOLUTIONS

RAMS CALCULATIONS

PROCESS  
CAPABILITIES

FULL SERVICE

REVERSE ENGINEERING

ASSEMBLY ENGINEERING



# Primary suspensions

All kind of primary suspension designs

- Conical spring
- Guiding bush
- Chevron
- Guiding link
- Hydrobush



# Secondary suspensions

Different secondary suspension applications:

- Air spring systems
- Emergency springs
  - Bushings
  - Buffers
- Layer springs



# Other railway applications

SUBSYSTEMS



COUPLER PARTS



BRAKE SYSTEMS



MOTOR AND GEARBOX



RESILIENT WHEELS



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