



# Solutions for Wind Turbines

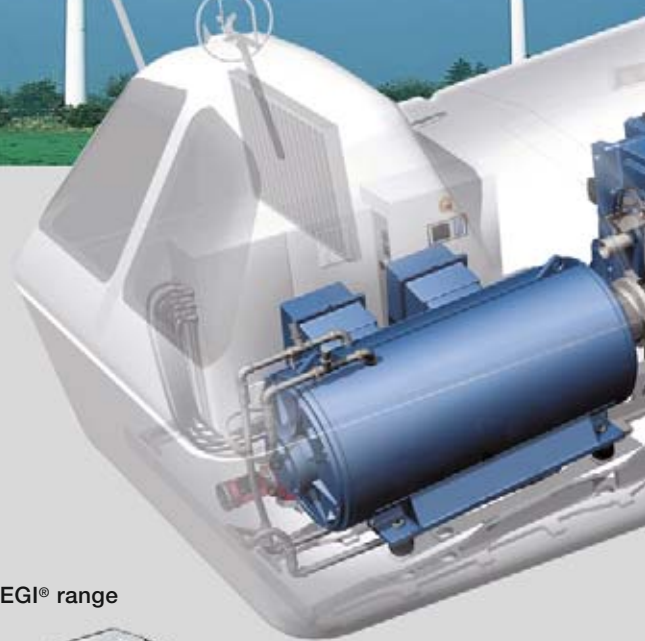
Vibration Control

Nature is a limitless storehouse of power. The task of our age is to tap this power to generate pollution-free electric current. Rubber and plastic products and systems from ContiTech are mainly involved when wind is changed into energy.

# Elastic mounts isolate vibrations and make wind turbines quieter

## Neutralizing axial and radial loads

A wind turbine in operation is subject to oscillations, vibratory stressing, translatory motion and stressing due to canting and pressure. All of this is hard on the wind turbine's various components, especially in the case of large-scale, powerful plants. Vibration control technology is required to neutralize or damp the dynamic axial and radial forces to prevent components from being damaged and to ensure that the station can continue to function reliably. At the same time, noise emissions have to be reduced so that the environment is not affected.



## Product requirements

### SCHWINGMETALL® range



Compression mounts



C series dome mount



Dome mount with anti-break safeguard

### MEGI® range



Mount



Mount



Cone mount



Vulkollan® suspension bearings



### Development of mount components including concepts for vibration and noise reduction

Rubber-to-metal-bonded parts and polyurethane special elastomer suspension bearings are used for load absorption, impact and vibration isolation and damping of critical resonances emitted by stressed structural parts. Elastic bearings are employed, for example, for the suspension of the gearbox and generator, tear-resistant dome mounts for the acoustic decoupling of the pod housing, and SCHWINGMETALL® and MEGI® standard articles for the elastic suspension of converters, switchgear cabinets and other important functional parts. Special solutions are worked out to meet specific customer requirements not covered by the standard range.

ContiTech Vibration Control offers suspension concepts designed specifically for the respective plant type, size and power output. Compact solutions are realized for small dimensions. All components require little maintenance and are made of high-quality, corrosion-resistant materials for a long service life.

### Dedicated solutions

*Hood suspension*



*Generator suspension*

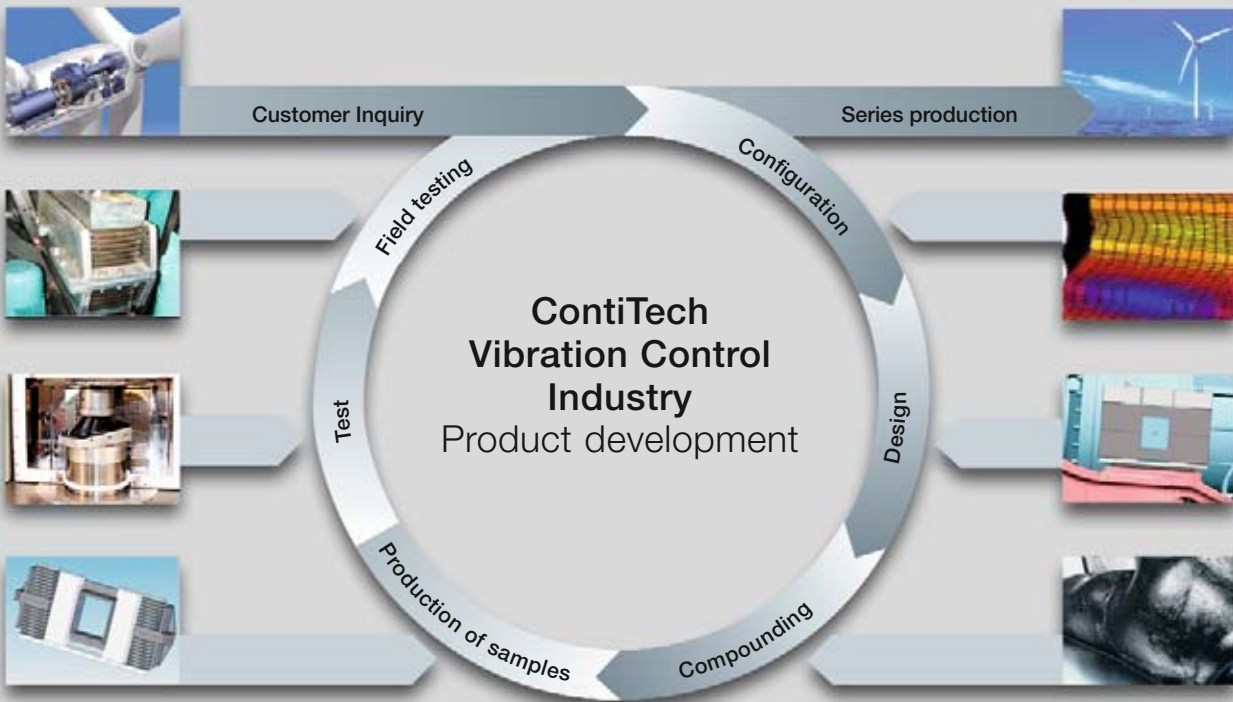


*Gearbox suspension*



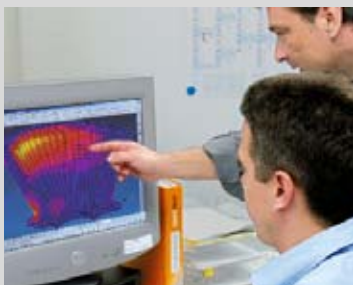
# Our service – competent and comprehensive

Customized solutions from the inquiry up to series production



## Technical service

- ▶ Design of metal and elastomer components
- ▶ Service life calculation
- ▶ System analyses
- ▶ Elastokinematics
- ▶ On-site vibration measurement
- ▶ Vibration measurement in the Acoustics Center at the Continental NVH lab



Partner for comfort and safety

# ContiTech Vibration Control

**ContiTech Vibration Control** is a development partner and original equipment supplier and recognized world-wide as a specialist for vibration control technology and noise isolation. Our state-of-the-art analysis and test methods ensure top product quality and short development phases. Our production employs highly sophisticated testing methods that ensures the consistently high quality of all our products and systems.

Our production plants are all certified according to QS-9000, ISO 9001 and VDA 6.1, our environmental management system to DIN EN ISO 14001.

Together with our sales partners, we guarantee the high availability of our SCHWINGMETALL®, MEGI® and ROTAFRIX® brand ranges. We carry over 1,000 standard components for the most diverse applications in vibration control technology and noise isolation.

Our online product databases on the Web provide an in-the-nutshell overview of our range.



[www.schwingmetall.com](http://www.schwingmetall.com)



[www.contitech-megi.de](http://www.contitech-megi.de)

These sites have search engines for locating specific products and calculation tools for configuring individual products. Technical literature and CD ROMs round off our broad range of information.

## Active vibration absorber system – born of innovative development competence

At present we are developing mount systems that respond actively to the forces with which wind turbines have to contend. Active absorber systems have the job of optimally countering these alternating forces by providing broadband vibration compensation in the wind turbine. The underlying functional principle is simple: An actuator employs electric energy to generate counter-acting vibration, which is transmitted to components – the pod, for instance – that are particularly subject to stressing. In this way specific vibration can be targeted for reduction.



[www.contitech-online.com](http://www.contitech-online.com)



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The ContiTech division of the Continental Corporation is a development partner and original equipment supplier to numerous industries for high-quality functional parts, components and systems. With its know-how in rubber and plastics technology, ContiTech contributes significantly to industrial progress and mobility that is safe, comfortable and eco-friendly.

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