

**AirLoc**

stops vibrations

## THE COMPANY

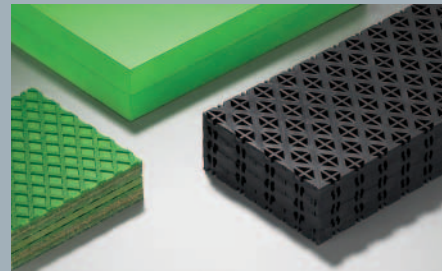
### **AirLoc Schrepfer – for innovations in levelling and vibration engineering**

For more than 50 years the name AirLoc Schrepfer has stood for high-quality products in the areas of vibration engineering, structure-borne noise isolation and machine setup technology. When it comes to foundation isolation for newspaper rotary printing presses and machine foundations, we are one of the world's leading suppliers of complete solutions. The quality of our products is ensured by our modern machinery, production depth and our own testing laboratory. A worldwide sales network guarantees the availability of our products and services. Our location near Zurich is conveniently situated in the heart of Europe.



### **AirLoc Schrepfer – Application-specific maintenance-free solutions**

We produce and market effective and safe products at a good price-performance ratio. A broad range of products available from stock forms the basis for an economical product selection. We place great importance on careful manufacturing and handling and on-time delivery reliability.



### **AirLoc Schrepfer – for complete one-stop service**

We are a system supplier that offers our customers all-round service from the planning phase of a project right through to installation. Our extensive experience will help you improve your competitiveness.



## PRODUCTS AND SERVICES

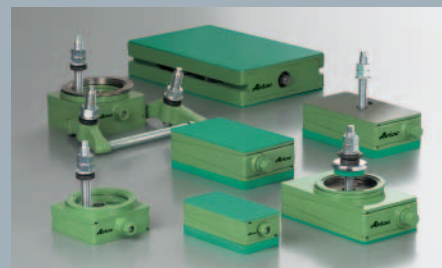
### **Measurements**

We offer our customers vibration measurements with state-of-the-art FFT analyzers to determine both natural frequencies of buildings and disturbing frequencies of vibration sources. The results obtained form the basis for a problem analysis from which recommendations for improvement can be derived. With the DYNO-METER measuring system we determine the exact load distribution of a machine.



### **Jacmount® Adjustable Levelers and Wedgmount® Precision Levelers**

Products for machine setup and vibration isolation are available in the following designs: Free standing, bolt-on or bolt-through the machine, rigid clamp. Additional features: Auxiliary anchoring and removable insert.



## ACTIVE ISOLATION

Active isolation protects the surroundings against disturbing vibrations caused by operating machines.

### **Protecting personnel from disturbing vibrations**

- Well-being at the workplace
- Performance increase of employees
- Improved quality of life in the workplace environment

### **Protecting buildings against disturbing vibrations**

- Dynamic forces acting on building components are reduced
- The service life of buildings is extended

### **Protecting the surroundings against disturbing vibrations**

- No vibration transmission to the surroundings
- No disturbance of the neighbourhood during shift work or night work
- Sensitive equipment or installations in the surroundings remain fully functional

## PASSIVE ISOLATION

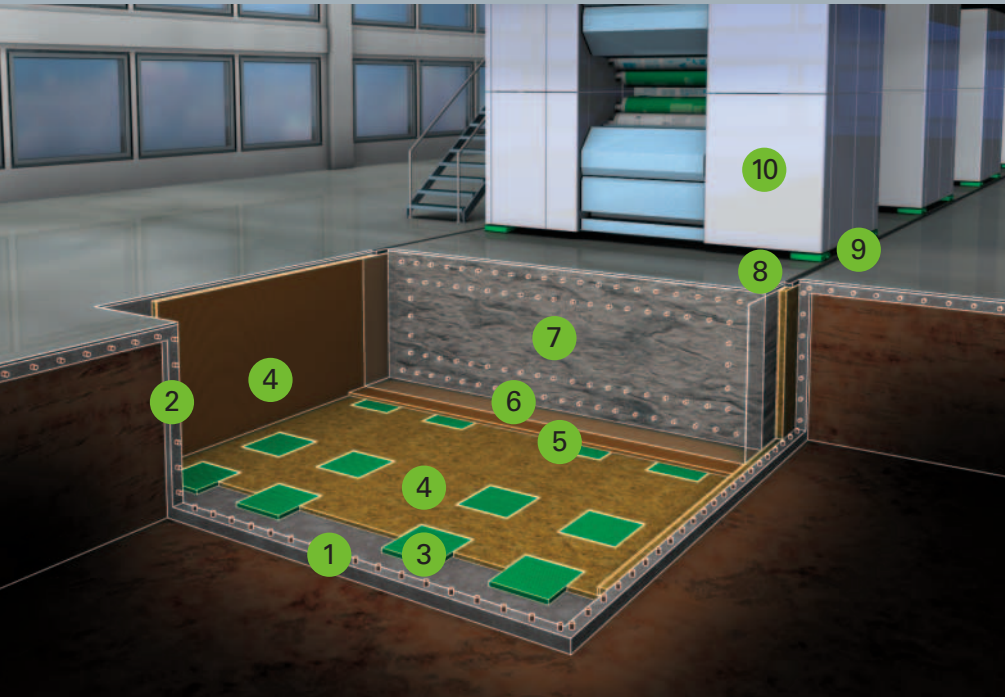
Passive isolation protects sensitive equipment and instruments against disturbing vibrations from the surroundings.

### **Protecting sensitive equipment**

- Undisturbed operation of high-precision production-, measuring- and testing equipment
- More effective planning of production plants
- Protection against the effects of earthquakes

# Foundation isolation by AirLoc: layer for layer a well-thought-out system!

## DESIGN OF A FOUNDATION ISOLATION SYSTEM



- 1 Pit bottom

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- 2 Pit wall

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- 3 AirLoc isolation pad sets

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- 4 AirLoc KombiRoc pads

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- 5 Cover pads

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- 6 Cover film

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- 7 Foundation block

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- 8 Elastic joint seal  
Option: System to accommodate Fork Lift Traffic (AirLoc FAP)

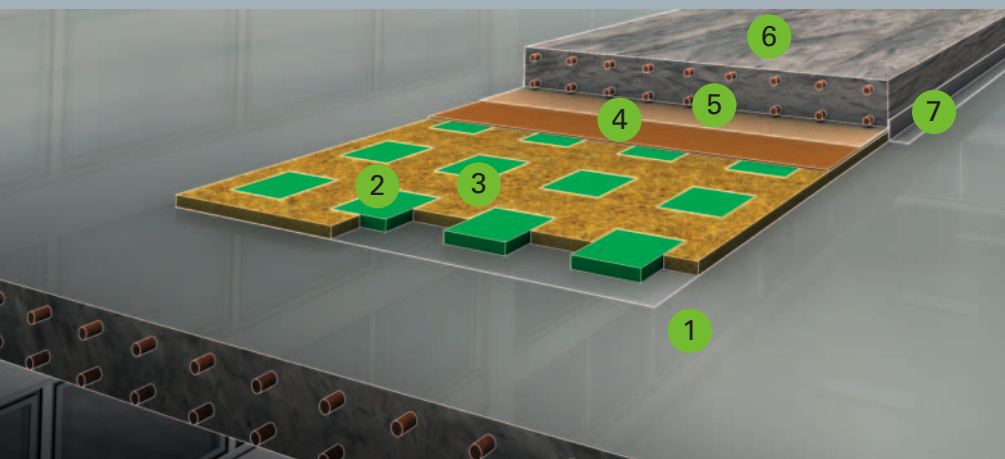
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- 9 AirLoc Wedgmount®  
Precision Levelers

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- 10 Machine

## DESIGN OF A BASE ISOLATION SYSTEM



- 1 Ceiling

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- 2 AirLoc isolation pad sets

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- 3 AirLoc KombiRoc pads

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- 4 Cover pads

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- 5 Cover film

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- 6 Concrete base

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- 7 Cover over the base joint



**Where are machine foundations used?**

- With machines of low inherent stability that depend on additional rigidity provided by the subsoil and that transmit damaging disturbing vibrations to the surroundings.
- With plant and equipment that comprise several components, that have to be precisely aligned, and that necessitate vibration isolation.

**What is the effect of a machine foundation?**

If a machine is firmly anchored to the machine foundation, this results in a system that is free to vibrate and that includes the machine mass and the foundation mass. The additional mass of the foundation block results in a reduction in the vibration amplitudes when compared to those of a machine without a foundation. The additional torsional rigidity of the foundation block has a positive effect on the quality and reliability of the machine.

**Limits of a machine foundation**

Purely from a mathematical point of view the vibration amplitudes decrease as the foundation mass increases. However, this effect has certain limits, on the one hand because the foundation soil cannot withstand an infinite load, and on the other hand because the costs of foundations exponentially increase with an increase in mass.

**A vibration-isolated foundation is the optimum solution**

In a vibration-isolated foundation the foundation block is decoupled from the foundation soil or from the foundation pit. The incorporation of an elastic layer made of precisely engineered AirLoc isolation pads results in significantly better isolation of the dynamic forces acting on the foundation soil. At the

same time the positive effect on improved torsional rigidity of the equipment is fully maintained. In most cases decoupling makes it possible to reduce the foundation mass when compared to a rigid-base foundation. Overall, an AirLoc vibration-isolated foundation is therefore more economical.

**Why decide on an AirLoc vibration-isolated foundation?**

- For each specific application AirLoc isolation pads are individually selected and designed in terms of number and position. When compared to full-surface isolation mats, the AirLoc system takes into account uneven load distribution of supported equipment. This is a prerequisite for achieving the best possible vibration isolation.
- AirLoc foundation isolation is maintenance-free for the entire service life of the machine.
- Decades of experience in the field of foundation isolation are indispensable for the correct design and a long service life.
- More than 50 years of successful project design involving hundreds of foundation systems worldwide provides customers with the assurance of working with a competent partner. Please ask for our list of application references.

For further information visit our website [www.airloc-schrepfer.com](http://www.airloc-schrepfer.com).

# Where does AirLoc successfully use maintenance-free foundation- and base isolation systems?

Area of application	Foundation- or base isolation	Jacmount® Adjustable Levelers or Wedgmount® Precision Levelers recommended in addition
<b>Printing</b>		
Web rotary presses	●	●
Gravure	●	●
<b>Manufacturing industry</b>		
Presses	●	●
Hammers	●	●
Grinding machines	●	●
Machining centres	●	●
<b>Rotary machines</b>		
Compressors	●	
Refrigerators	●	
Fans	●	
Internal combustion engines	●	
Emergency generating sets	●	
<b>Measuring/test engineering</b>		
Measuring machines	●	●
Test machines	●	●
<b>Laboratory</b>		
Laboratory equipment	●	●
Weighing installations	●	●

**Is your machine type or application not listed?**  
 Our expert team is happy to help you with your selection. For contact details see the last page of this brochure.

## Implementation example for a web rotary press for newsprint

The foundation pit is prepared ready to install the vibration isolation system.



To protect the isolation system, cover pads are installed, and preparations are made for pouring the foundation block.

Installation of the isolation system is complete. The green AirLoc isolation pad sets are shown. Between them are the specially designed KombiRoc pads for filling the remaining space.



After completion of the machine installation, the vibration-isolated foundation can hardly be seen.

# AirLoc foundation systems installed worldwide: eloquent references indeed!

**With AirLoc you are on safe ground**

Over the past 50 years we have designed hundreds of foundation isolation systems worldwide with leading machine manufacturers. In the printing industry, above all, large and heavy rotary printing presses for newsprint are installed on AirLoc-isolated foundations.

A large number of presses and high-precision machine tools of globally renowned manufacturers are producing top quality products on AirLoc-isolated foundations.

For special machines in the field of measuring/test engineering, and in particular in the automotive industry, AirLoc passively-isolated foundations have proven to be extremely successful.

**Reference examples**



**Projects with successful enterprises in the printing sector**

- KBA Koenig & Bauer AG
- manroland AG
- WIFAG Maschinenfabrik AG
- Officine Meccaniche Giovanni Cerutti SpA
- Goss International Corporation
- TKSTokyo Kikai Seisakusho Ltd.

**Projects with successful enterprises in the industrial sector**

- |                 |                               |
|-----------------|-------------------------------|
| Gleason-Pfauter | Grinding and milling machines |
| Waldrich        | Grinding machines             |
| Soenen          | Presses                       |
| Banning         | Drop hammers                  |
| Zeiss           | Measuring machines            |
| Weingarten      | Presses                       |
| Naxos           | Grinding machines             |
| Maha AIP        | Motor vehicle test stands     |
| Farina          | Presses                       |
| Bêche           | Pneumatic hammers             |
| Schuler         | Presses                       |
| Brück           | Eccentric presses             |

# **AirLoc**

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