

# Reducing vibrations caused by heat pumps

Minimise noise while increasing device's service life.



## Effective vibration-decoupling using Isotop®, Sylomer® und Sylodyn®

During the operation of heat pumps, the compressors and fans used cause heavy vibrations, which are transmitted into the surrounding environment and connecting pipes as structure-borne noise.

The effectiveness of vibration-decoupling using Isotop®, Sylomer® and Sylodyn® has been proven over decades. These products, specially developed and produced by Getzner, impress with excellent effectiveness and an as yet unmatched durability of the bearing itself. Our experts are well versed in the variety of bearing solutions available, including options to decouple the entire housing and/or the individual components.

### Benefits and product features

- Reduction in secondary airborne noise (noise level)
- Long service life
- Durable elastic properties ensure long-lasting effect
- Extremely low natural frequencies possible (down to 3Hz)
- Weather- and UV-resistant

### Application areas

- Decoupling of components (compressors and fans)
- Decoupling of the entire heat pump (housing, suspension points and steel frame)



Bearing of an outdoor unit on the floor (footing) using Isotop® MSN elements



Bearing of a suspended outdoor unit using Isotop® MSN elements



Decoupling of an indoor unit using Sylomer® point bearings

### OEM solutions

Some heat pump manufacturers supply a vibration decoupling solution along with their devices. Unfortunately these compressors are usually decoupled with cheap, ineffective rubber bearings. There are, however, a few leading manufacturers that already use solutions from Getzner. One market leader has, for example, opted for the low-frequency and effective bearing of the complete internal structure – compressor, heat exchanger and condenser – of various heat pumps by mounting them on a steel frame and then using Isotop® spring elements or Isotop® MSN-DAMP products.

At a disturbing frequency of 25 Hz and a speed of 1,500 rpm, the efficiency of the solution is 96 %. The manufacturer therefore ensures a high level of comfort for the customer while the equipment is in operation and secures a considerable advantage over their competitors.

### Installation on site

If a heat pump is supplied by the manufacturer without a vibration-decoupling solution, the installer can calculate and implement a suitable bearing. The appropriate product is usually fixed underneath the heat pump, thus preventing vibrations being transferred to the building.