

**Cross Coil Operation in 60 mm bore:**

This unique coil system developed by Neos Biotec offers real cross coil operation (uniform volume transmit + surface phased array receive) in extremely narrow bore environments (60 mm).



**Maximum integration:**

In order to make this possible, all coil parts and subsystems (mouse bed, Rx phased array, Tx volume coil, anaesthesia mask, shield, ...) are seamlessly integrated into one single enclosure.

**Split design to facilitate animal preparation:**

In order to get complete access to the animal bed, the coil system has been designed in two parts. The upper part can be easily removed to get the necessary access for animal preparation.

**Technical Specifications:**

- Nucleus: ..... 1H
- Main Field (B0): ..... 7 T / 9.4 T  
(other fields available on demand)
- Outer diameter ..... 59 mm
- Transmit volume coil:
  - Linear polarization
  - Tune and match: preadjusted (manual adjustment knobs not necessary)
  - Active length: 60 mm
  - Actively decoupled
- Receive surface array:
  - 4 elements (2x2 configuration)
  - Active area: approx. 30 x 30 mm
  - Actively decoupled
- Additional equipment required:
  - PIN diode driver

**Minimum attenuation for simultaneous PET + MRI:**

Neos Biotec's compact coil setup has been designed to minimize attenuation of PET signal, being the perfect coil system solution to use in combination with a PET ring insert for simultaneous PET + MRI.

**New applications:**

Neos Biotec's compact coil setup allows cross coil operation in situations where it was not possible until now:

- Microimaging / high strength gradient inserts.
- Cryogen-free superconducting magnets (dry magnets).
- PET inserts for simultaneous PET + MRI.