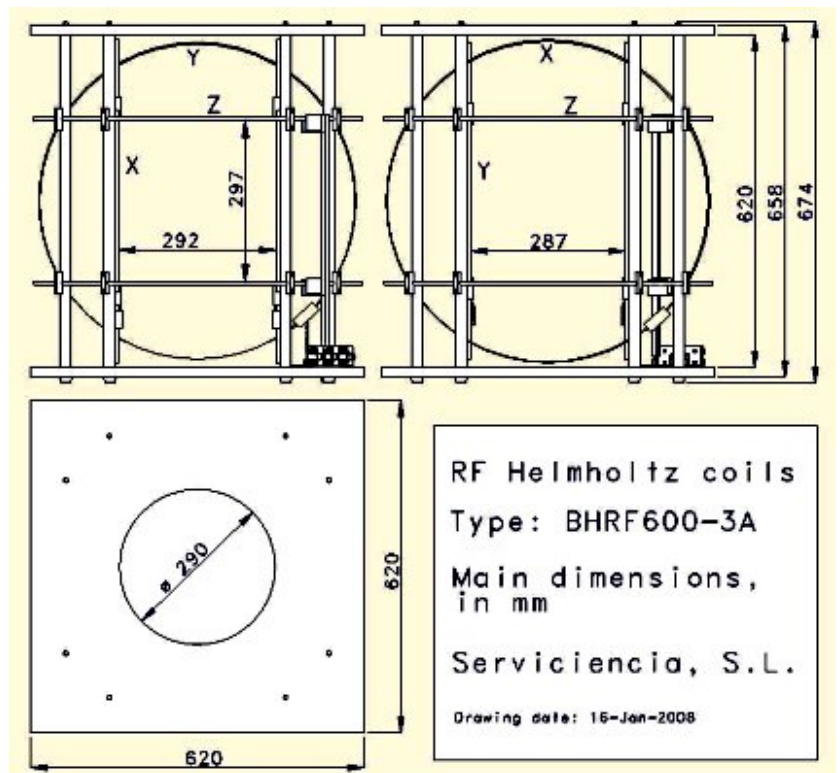


600 mm Helmholtz Coils, for radiofrequencies

Ferronato® - BHRF600-3-A

- Desktop set of three pairs of Helmholtz coils, for laboratory and general purposes.
- Generates magnetic fields from 0 Hz to 2 MHz.

- Similar generating field rate for the three pairs: **9 $\mu\text{T/A}$**
- Accurately made, with error smaller than $\pm 1\%$ in the generated field.
- Thanks to its simple support and its joins by screws the coil arrangement can be modified with relative facility.
- The coils can undergo heatings of until at least 100 °C without damage.
- Robust construction but with a reasonable weight.
- Totally constructed with non-ferromagnetic materials.
- Excellent quality/price ratio.
- There are versions of one and two axis available, with similar characteristics:
 - **BHRF600-1A-A** Set of one pair (one axis), X.
 - **BHRF600-1B-A** Set of one pair (one axis), Z (vertical).
 - **BHRF600-2A-A** Set of two pairs (two axes), X and Y (horizontal/horizontal).
 - **BHRF600-2B-A** Set of two pairs (two axes), X and Z (horizontal/vertical).



SPECIFICATIONS OF THE BHRF600-3-A COIL-SET

Field/Current ratio	9.0 $\mu\text{T/A}$ (0.09 Gauss/A) $\pm 3\%$, for each pair, X, Y or Z. See in below more accurate values for every pair.
Maximum field	72 μT (0.72 Gauss) in a steady way (environmental temperature: 20 °C). Each pair.
Maximum current	8.0 A DC-AC _{rms} in a steady way (environmental temperature: 20 °C). Each pair.
Maximum RF voltage	2000 V _{peak} (4000 V _{peak-peak} for symmetrical waveforms). Each pair.
Magnetic field homogeneity	Differences smaller than $\pm 1\%$ with respect to the centre, in a spherical volume of 150 mm of diameter centred in the coils. Differences smaller than $\pm 5\%$ in a spherical volume of 220 mm of diameter. Volumes to 1% and 5% greater in some directions.
Orthogonality error	$< 0.2^\circ$ for any pair of axes.
Connection	Two female 4-mm bananas (able to grip bare wire also) and a female BNC connector for each pair.
Maximum working temperature	80 °C for the set / 100 °C for the coils, as measured on coils surface.
Coil cross section	Winding: 6.5 x 1 mm. Total (external): 8 x 3 mm.
Materials	Winding in enamelled copper wire reinforced with fibre-glass mat and filled with epoxy resin. Pillars and brackets of Acetal ("Delrin"). Upper and lower plates in foamed PVC. Screws of brass and Nylon.
Maximum dimensions	Width 620 mm x Depth 620 mm x Height 674 mm.
Weight	18.8 kg, for the BHRF600-3-A set.
Accessories	Delivered with Instructions of Use in Spanish and English.
Warranty	Two years.

SPECIFICATION FOR EACH COIL PAIR

	X pair (medium)	Y pair (smaller)	Z pair (larger)
Effective diameter, in mm ($\pm 0.5\%$)	599.4	589.0	609.8
Turns number	3	3	3
Field/current ratio ($\pm 1\%$)	9.00 $\mu\text{T/A}$	9.16 $\mu\text{T/A}$	8.85 $\mu\text{T/A}$
DC Resistance, at 20 °C ($\pm 5\%$) (1)	154 m Ω	152 m Ω	149 m Ω
Self-resonance Frequency ($\pm 2\%$)	2.64 MHz	2.70 MHz	2.66 MHz
Self-inductance ($\pm 7\%$)	37.3 μH	36.6 μH	37.9 μH

(1) - Resistance measured at the general connection block.

- These specifications are subject to change without prior notice -

Updated: 12-Jul-2008

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