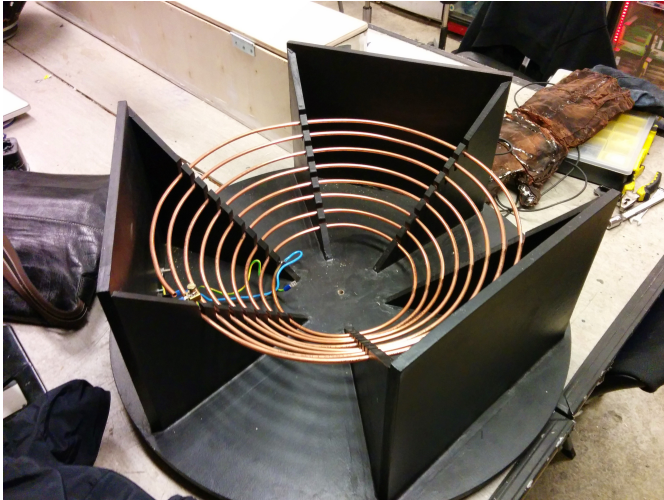


TK1000 L1

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Teori

Bakgrunn

TBD

Virkemåte

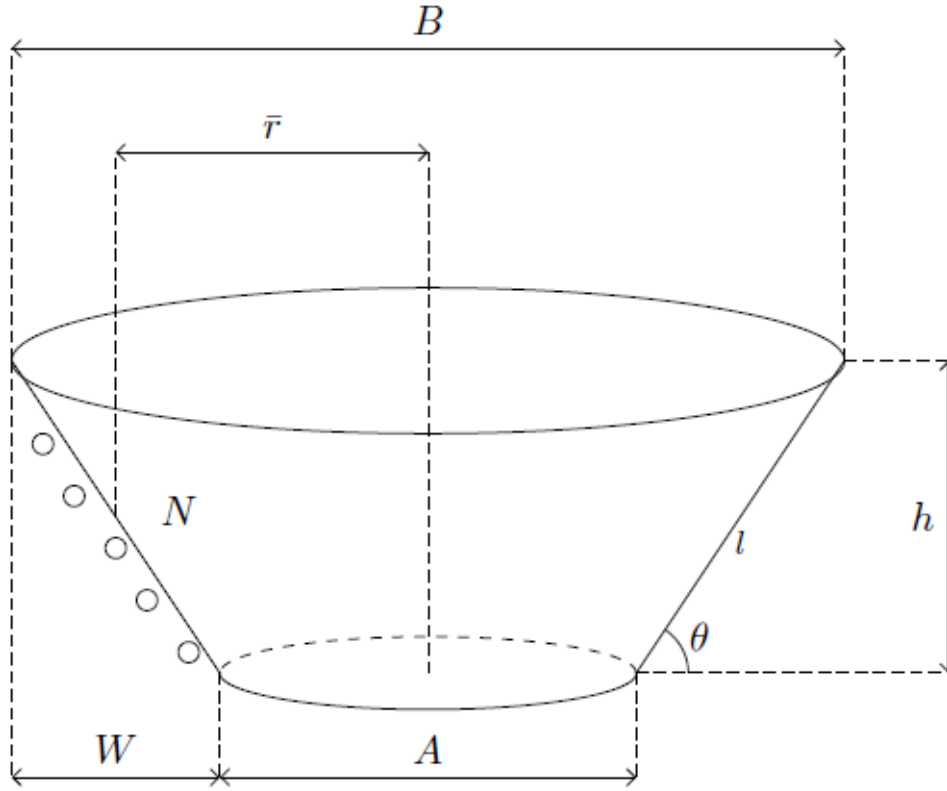


Figure 2.12: Conical coil

$$L_1 = \sqrt{(L_{1V} \cdot \sin(\theta))^2 + (L_{1H} \cdot \cos(\theta))^2} \quad (2.10)$$

$$L_{1V} = \frac{R^2 N^2}{9\bar{r} + 10h}, L_{1H} = \frac{R^2 N^2}{8\bar{r} + 11h} \quad (2.11)$$

$$\bar{r} = \frac{A}{2} + \frac{W}{2} \quad (2.12)$$

$$\sin(\theta) = \frac{h}{l}, \cos(\theta) = \frac{W}{l} \quad (2.13)$$

$$l = \sqrt{W^2 + h^2} \quad (2.14)$$

$$W = B - A \quad (2.15)$$

$$L = \frac{\mu_0 N^2 \pi r^2 \sin^2 \alpha}{2} \quad (2.15)$$

is height of cone, B diameter top of cone, A diameter base of cone, N number of turns, r is effective with of coil l is length of coil, α is angle of coil, L_V is the vertical component of the inductance, L_H is the horizontal part of the inductance. This equation comes from the empirical wheeler equations [18].

Versjoner

V0.1 (2009)

Changelog

1. Laget av Eirik (og Dewald?)

Errata

1. Bananpluggen

V1.0

Release: 2014

Changelog

1. Tegnet i CAD
2. Frest ut med CNC
3. Power conn connector istedenfor banan

Errata

1. Ingen

Produserte spoler

SN	V	Montert	Induktans								Plassering	Kommentar
?	?	✓	57.4μH									
?	0.1	✓										Den som tar fyr
01	1.0	✓									TK1000 SN:01	Den dyre
02	1.0	✓									TK1000 SN:02	Den store