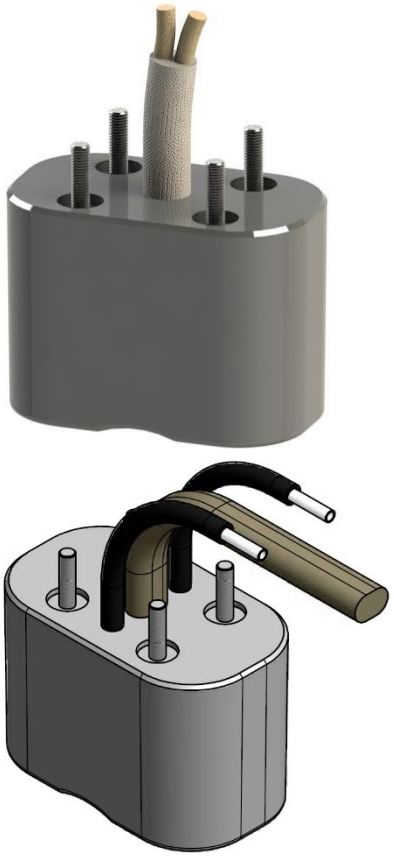
Opticoil ™ Induction Heating Work Coil
Opticoil ™ LC Induction Heating Work Coil
D0336-A-AI Opticoil Datasheet

Features & Benefits

- Greatly improve gauge control;
- Increase Mill speed;
- Reduce edge cracking and strip breaks significantly (Metal);
- Up to 98% power efficiency;
- Reduce bending force allowing less Work Roll wear;
- Important reduction in cost compare to conventional hot lubricant sprays;
- Universal design matching a wide array of rolls and other surfaces
- Narrow, uniform heating
- High Flux density allowing great heating effect
- Optional liquid-cooled design (Opticoil LC) for increased power output and resistance to process temperature
- Less sensitive to operating gap than traditional roll induction heating work coils
- Encapsulated in highly resistant potting epoxy
- Standard threaded mounting studs
- Profiled shape to minimize air flow turbulence



Applications

- Calendering
- Roll heating
- Roll edge heaters
- Metallurgy

General Description

Comaintel Opticoil™ Induction heating work coils are a perfect fit for Comaintel's line of power converters. Using high flux density materials and low resistance Litz wire, Opticoils™ are well suited for most induction heating applications.

The Optional liquid-cooled patented design (Opticoil LC) provides the work coil enough cooling to operate at ambient temperatures beyond 250ºC when used in typical applications. An optional PTC protects the work coil from over-heating. The standard Opticoil™ is rated for operation up to 130°C.

Encapsulated in robust resin epoxy, Opticoils™ are resistant to wear and provides a smooth surface. They are also resistant to many chemicals, including most solvents used in industrial cleaning processes.

Used primarily in pulp and paper calendering applications, this versatile work coil will also transfer its power to loads of different geometries. The flux travels beneath the recessed area on the work coil face. Because of its patented technology, Comaintel was able to diffuse the flux lines evenly so that the uniformity of the heating pattern is greatly enhanced. The Opticoil™ design has been optimized to have a heating pattern of 60, 75 or 120 mm wide. For all Opticoils, the heating pattern can be lowered to 30mm when used in a rotated position.

Selection Grid

Product	Product [1]numbers	Heat zone	Operating temperature	Typical Power Output	Applications / Notes
Opticoil™ 60	**V0030**[2] V0002[3]	60mm	130°C	4kW	For applications requiring narrow heating zones or highest power density
Opticoil™ 60 Liquid-Cooled	**V0035**[2] V0012[3]	60mm	250°C	6kW	For use on high temperature applications /high power density
Opticoil™ 60 Series Winding	**V0067**	60mm	130°C	4kW	Optimized design for lower current and frequency
Opticoil™ 75	**V0040**	75mm	130°C	5kW	
Opticoil™ 75 Liquid-Cooled	**V0041** **V0097**	75mm	250°C	7kW	For use on high temperature applications /high power density
Opticoil™ 75 Series Winding	**V0065**	75mm	130°C	5kW	Optimized design for lower current and frequency
Opticoil™ 120	**V0044**[2] V0016[4]	120mm	130°C	6kW	For larger heating zone
Opticoil™ 120 Narrow	**V0052**[2] **V0057**[2] V0043[4]	70	130°C	6kW	No pattern diffusers. Narrow heating zone
Opticoil™ 120 Liquid-Cooled Narrow	**V0036**[2] **V0062**	70	250°C	8/12kW[5][6]	For use on high temperature applications /high power density
Opticoil™ LG2 Liquid-Cooled	**V0048**	120mm	130°C	6kW	For use in applications requiring larger operating gaps.

Additional technical information available:

- Electrical Properties
- Mechanical Properties
- Mechanical Drawings

Contact us for additional information at info@comaintel.com or 819-538-6583 (Canada)

[1] Bold denotes standard model
[2] Work coil with short mounting studs
[3] Work coil with long mounting studs
[4] Work coil with long mounting studs and larger mounting pattern. Not recommended for new designs
[5] Requires 12kW power module with thermal protections and external temperature monitoring
[6] Roll temperature, speed should also be monitored to avoid Opticoil face deterioration; other factors to be considered