CPC-II
(Current-to-Pressure Converter, Generation 2)

Product Release Announcement
(20 May 2008)

CPC-II Improvements

Woodward is pleased to announce the release of its CPC-II converter product line. This converter is designed to directly replace its predecessor, the CPC converter product line, as well as similar competing products. The CPC-II (current-to-pressure converter, generation 2) is an electrohydraulic pressure-regulating valve designed for use in positioning single-acting steam turbine valve cylinders. This converter's superb accuracy and resolution make it ideal for steam turbine throttle valve control and related turbine speed and load control.

A major design improvement from its predecessor is its improved robustness and resistance to dirty oil. This converter was created to assist with solving the steam turbine market's number one reliability problem: oil contamination. The CPC-II's new robust design (stronger actuator, corrosion-resistant material, single moving rotary valve, and self-cleaning port design) makes it ideal for challenging applications where dirty or contaminated oil may be used.

Old CPC and New CPC-II

CPC and Voith Replacement

For ease of replacement, the CPC-II converter's mounting and oil interface manifold is identical to Woodward's old CPC model of converters. The CPC-II converter's electrical housing is, however, 30% larger than the older CPC, due in part to its larger increased actuator size and force. See CPC-II product spec 03352 for exact product dimensions, and to understand if your application is affected. In addition to unit robustness, the new control incorporates many new features and functions not previously available.

The following table compares the capabilities of the old and new converter product lines.

Capability / Function	CPC	Voith	CPC-II
Dirty oil resistant			X
Silt build up resistant			X
Valve linearization compensation			X
Corrosive contamination resistant		X	X
Sticky (high-friction) port compensation			X
Accepts redundant pressure setpoint inputs			X
Accepts redundant pressure sensor inputs			X
Accepts external pressure sensor			X
Accepts external cylinder position sensor			X
Internal health monitoring			X
Manual stroking function		X	X
Isolated inputs and outputs			X
Performance trending tool			X
Performance / stability adjustments	X		X

In many cases, the updated features and functions available with the new CPC-II product line present opportunities for existing CPC or Voith converter users to upgrade their present system.

Users desiring increased system availability may upgrade their system with the CPC-II converter and add redundancy as required by their specific application.

Users, who have experienced system failures due to dirty oil may desire to upgrade to this new oil contamination-resistant converter.

Since the CPC-II is a functionally direct replacement for the old CPC converter, a simple and cost-effective upgrade is possible.

Optionally a "Voith to CPC-II" adapter plate is available to simplify system upgrades.

Initial CPC-II Installation History

On 12 November 2007 initial CPC-II installation customer Shandong Qingdao Alkali replaced one of their old converters with the new CPC-II. In doing so, they removed the oil cooler they were using because the new CPC-II's dry motor architecture can accept much hotter temperature oil, and removed their special converter oil supply filter, because the CPC-II can now withstand up to 40-micron-sized dirt particles in the oil. Because of the success of the CPC-II upgrade, Shandong Qingdao Alkali management now plan to upgrade all seven of their turbines with a CPC-II solution.

Regards,
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