INTECH Power-Core™

TO THE EDITOR
FOR IMMEDIATE RELEASE

NEWS RELEASE

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METAL CORE DISSIPATES HEAT, REDUCES BACKLASH

Closter, NJ: Metal core is an integral part of Intech Power-Core™ gears, and helps to dissipate heat and reduce backlash. Gears are precision-machined from blanks produced in a gravity casting process which creates a permanent bond between the metal core and surrounding composite material.

The metal core opens new design options for non-lubricated gears in tough applications. At higher operating temperatures the power transmission from the shaft to the gear mesh creates a problem in all plastic gears, as the gear will expand away from the shaft, or the clamping force will relax in a gear attached with flanges; the gear will become loose. All-plastic gears also require a bigger backlash allowance to compensate for thermal expansion and swelling due to moisture absorption, making the gear noisy.

Intech Power-Core gears offer a secure metal-to-metal attachment to the shaft or through a flange, while cutting the thermal expansion backlash requirement of the composite in half. Since Intech Power-Core does not absorb moisture, no backlash allowance is required to compensate for swelling.

Thermal stability and the absence of internal stresses allow engineers to calculate the expected gear life for a given operating temperature. The gear calculation is based on extensive research data by a leading university, and generates data such as tooth root stress, expected gear life in number of hours and backlash.

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Gears are available in sizes from 1” to 30”, larger diameters on request. The metal core diameters range from ¾” to 6” and can be obtained in steel, stainless steel or aluminum. Larger diameters are produced by shrinking the composite onto a metal ring.

Intech’s engineers offer help with gear design for long wear and solutions for applications in which noise, wear, lubrication, vibration, shock-loading, moisture and chemicals present a problem for nylon, Delrin or metal gears.

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