Printed Motor Works

Company and Technology Introduction

Who we are

UK Motor Manufacturer

Based entirely in the UK, our motor manufacturing heritage dates back to the 1960's

Custom Design Service

Our experienced design team are fully equipped with Solidworks 2009 for design and mechanical analysis

UK Factory

Our facility in Hampshire, UK, has capacity for producing high volumes of printed armature motors

Strong Supply Base

Strong links with quality manufacturers in low cost regions of Europe and Asia for volume parts and specialist UK sources for precision parts, tooling and prototype builds

Quality Assured

Recognised quality system to ISO9001:2008 accreditation through the British Standards Institute

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What we do

Printed Armature Motor Manufacture

Printed Motor Works build a variety of motor types around the unique Printed Armature for a wide variety of applications and markets. Our special manufacturing technique for the printed armature is a closely guarded secret

Custom Motors

Using our extensive knowledge of electric motor technology we offer clients effective motion solutions from a technical, performance, constrained physical space and cost perspective

Customer Satisfaction Focus

Our sales and quality team strive to ensure we are always performing to the best of our abilities. All client feedback is analyzed and used to improve our customer service

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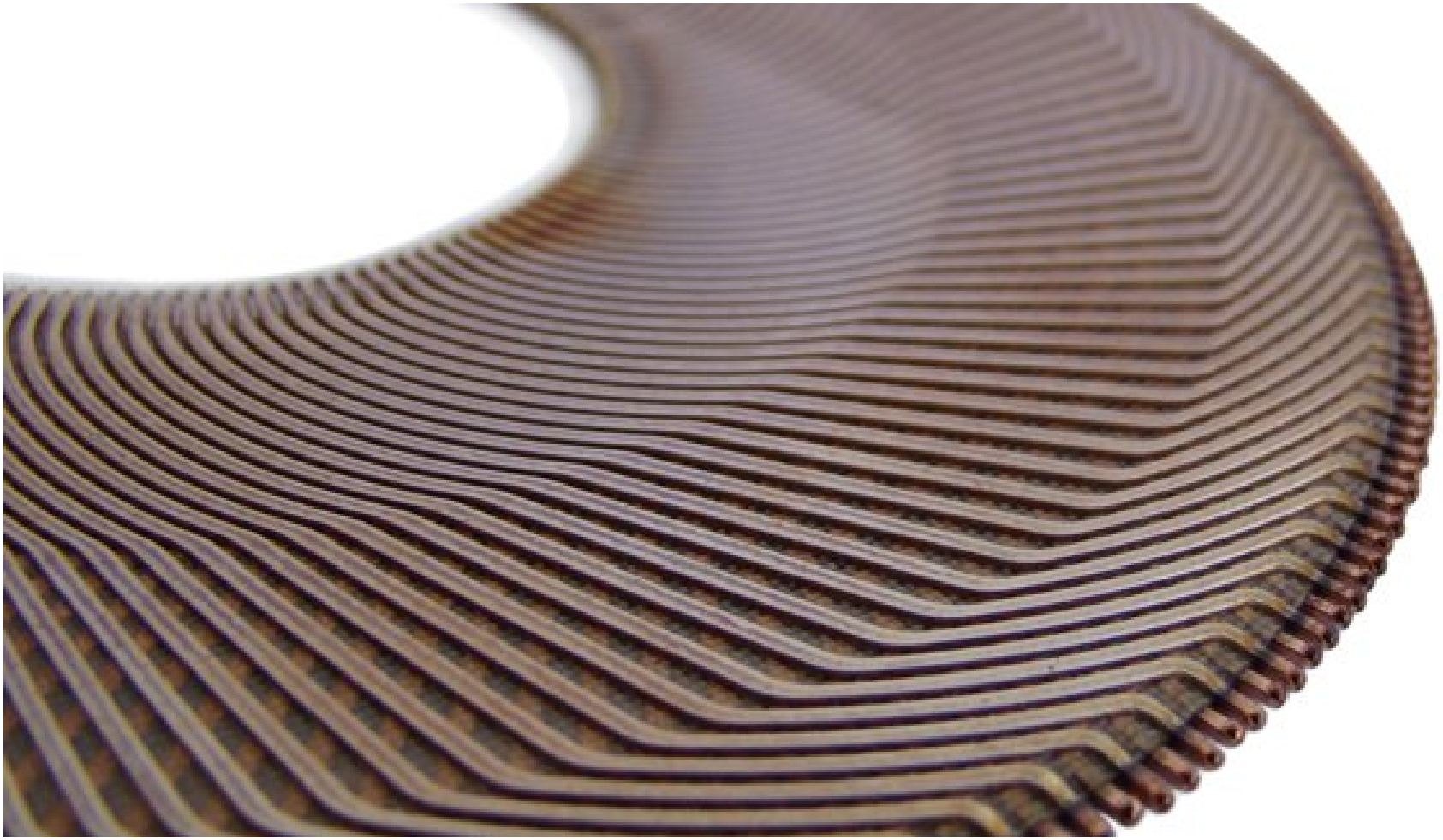
What we do

The Printed Armature



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The Printed Armature

The Printed Armature - Features

Low Brush Wear

Arcing is almost eliminated because armature has virtually zero inductance; as a result motor life can be as long as the bearing life

Compact Design

The motor design is as axially compact as possible. Our thinnest motor is only 28mm!

Rapid Acceleration

The printed armature motor can accelerate to full speed within 60° of rotation. Zero inductance means zero lag as current builds up in the windings

Low Noise

By eliminating brush arcing we have also eliminated associated noise. The design gives rise to optimal acoustics given the dense nature of the motor construction

Variable Speed

Simple speed control is possible as the motor's output speed is directly proportional to the input voltage

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The Printed Armature – Q&A

Where are the windings?

The “windings” are made from sheets of copper, notched and layered before being welded around the inner and outer diameters

How does it commutate?

Carbon brushes set in specific places and at specific angles create short paths through the armature by running directly on to the armature itself, eliminating the need for costly separate ring commutators

How is the armature held together?

The formed sheets of copper are held together by an advanced composite also used in aerospace applications.

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Markets

Medical	Well-known brand names trust our printed motors for human tissue and fluid analysis machines
Military	The printed armature motor's thermally stable properties mean that a special design has solved a variety of problems for the UK and US defence applications
OEM Machines	The printed motor provides motion solutions for film processing and printing to name but a few
Scientific Instruments	Our printed motor is at the heart of a very specialized seismic activity monitoring system, to give one example
Pumps	Employed in a variety of pump applications

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Sample Client Names

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Sample Client Names

The Printed Motor – Current design

All the features and benefits but at a niche price due to many specially machined components. Mounting conventions not to modern standards.

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The Printed Motor – Generation II

Even flatter!

Reduced number of components

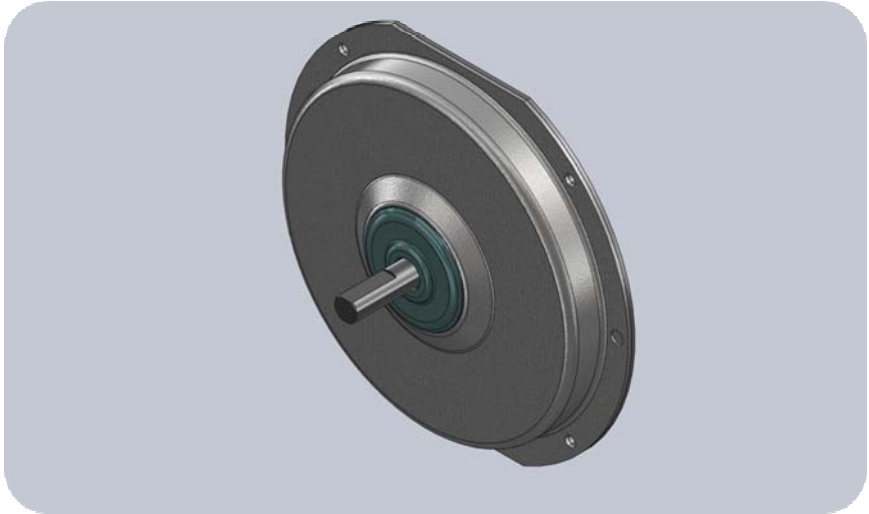
Lower weight

Modern materials and techniques

Simplified assembly

Easy to mount

Easy to add ancillaries



"Cost reduced for broader market appeal"

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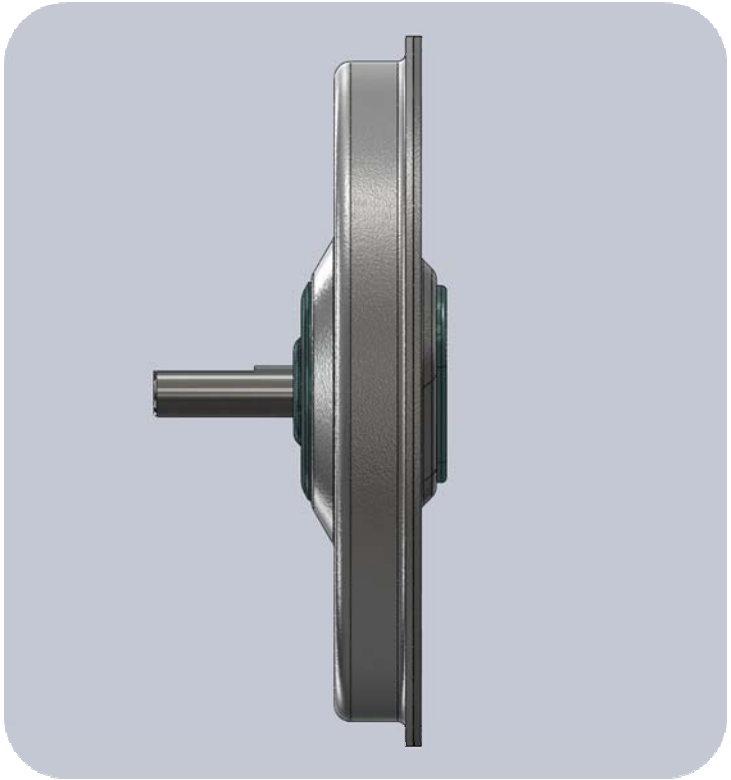
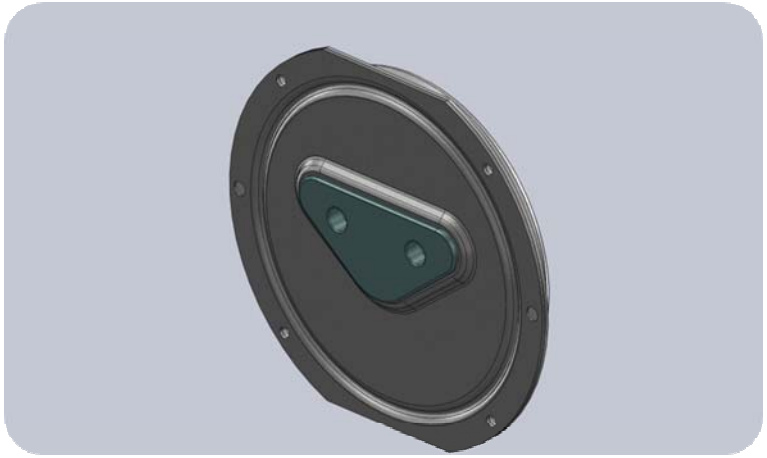
The Printed Motor – Generation II





"Simplified construction with modernized materials and techniques"

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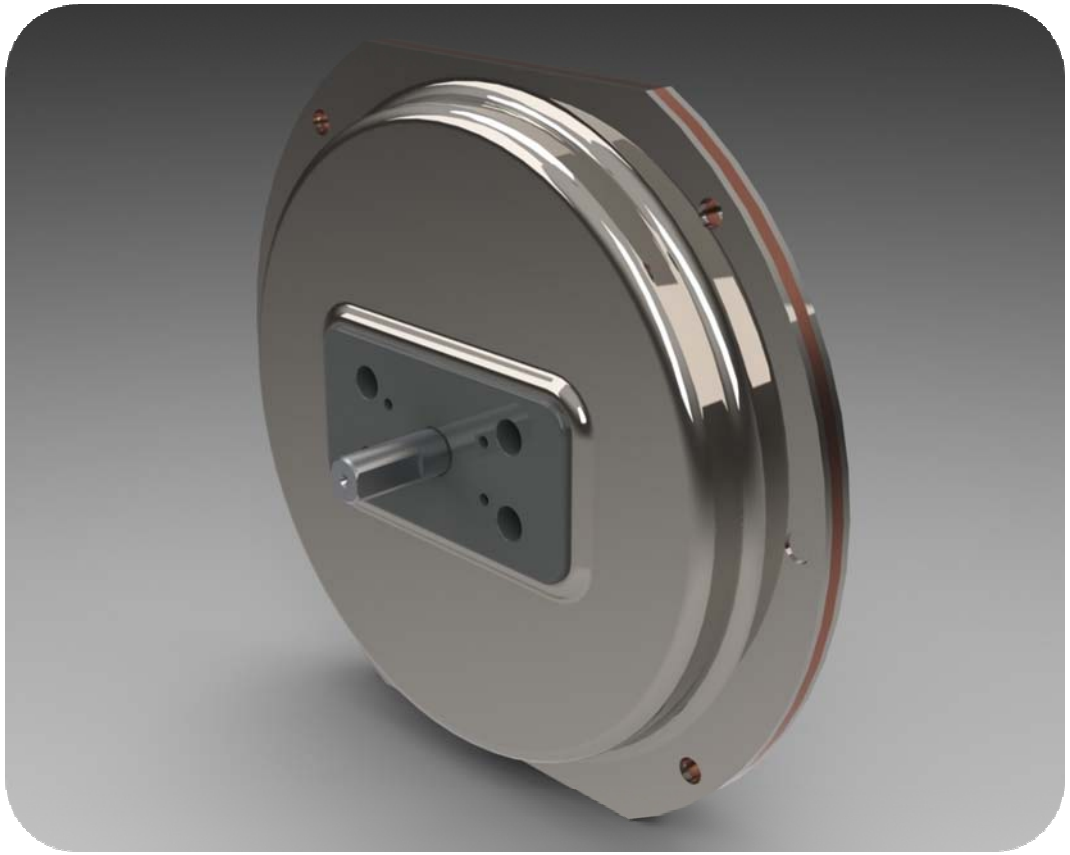
The Printed Motor – Generation II



Up to 1Kw Twin Armature Motor only 51mm deep!

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