

Spin Coating

A guide to spin coaters and chucks



Why choose PI-KEM?

For over 30 years, we have partnered with innovative researchers across Europe.

We don't just supply equipment; **We provide tailored solutions** for your specific goals.



Partnership:

No two projects are identical. Our Team works closely to understand your application ensuring the system you choose meets your performance and budget needs



Customisation:

If a standard tool does not meet your needs, our team will help design custom parts - from vacuum-less chucks for delicate samples to specialised bowls for use with corrosive photoresists and glovebox compatibility



Single-step Procurement

Through our network of specialist suppliers, we give you direct access to the complete suite of technology you need

Why Spin Coating?

Spin coating is essential for depositing uniform thin film layers. Whether you are building microfluidic devices or optical components, investing in a high-quality spin coater reduces the trial-and-error that delays your research

Spin Coaters provide:

✓ Uniformity:

High-speed rotation spreads liquid evenly across your entire substrate, preventing inconsistent films and material waste.

✓ Precise Control

Film thickness can be accurately tailored by adjusting the spinning speed, time, and solution properties

✓ Thin-Film Capability:

Spin coating allows the depositing of ultra-thin films, down to a few nanometres, which is hard to achieve using other methods

✓ Material Versatility:

Process a wide range of materials and fluid viscosities, giving you the ability to experiment and evolve your research.

✓ Streamlined Efficiency:

Avoid time-consuming setups. Programmable systems create dried, uniform films in under a minute, saving you valuable time

✓ Simplicity:

Straight forward operation. Designed to provide successful outcomes for researchers at all levels

Our Partners

We have long-term relationships with many industry leaders, ensuring we offer our customers a range of spin coaters, suitable for different budgets and applications.

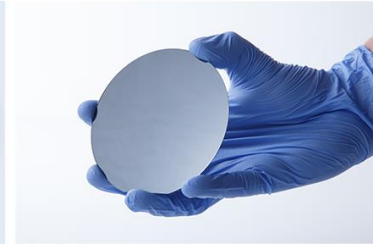
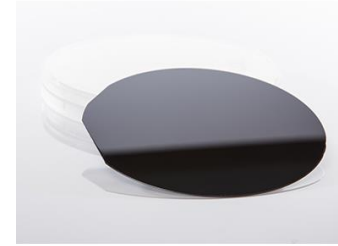
We also offer:

- A range of chucks engineered in a variety of materials to suit your coatings and substrates
- Accessories including vacuum pumps, multi-dispense systems, compressors and hot plates

Partner	Primary Advantage
SCS	Industry standard precision for quality control
Navson	High-precision models for pre-production prototyping
MTI	Academic & Teaching Labs



Overview of Models



Technical Features (Dependent on model)	MTI Corporation	Specialty Coating Systems (SCS)	Navson Technologies
Bowl Size	4", 5", 7" and 9"	8", 12" and 15"	5" and 10"
Programmability	2 steps to 10 steps. Memory storage up to 9 recipes	3 steps to 20 steps. Internal Memory storage for up to 30 recipes. External memory connectivity	Up to 100 steps, Internal memory storage up to 20 recipes. External memory connectivity
Max Spin Speed	500 rpm – 12, 500 rpm	9,999 RPM	12,000 RPM
Bowl Material	Polypropylene / Nylon	Stainless Steel and Teflon (PTFE) Coated	100% Metal-Free Propylene and Teflon (PTFE) Coated
Chucks	Non-vacuum and vacuum (some included)	Non-vacuum and vacuum, purchased separately	Non-vacuum and vacuum (some included)
Environment	Glovebox compatible or glovebox integrated	Glovebox compatible	Glovebox and ISO Class 5 Cleanroom
Options	Heating cover, UV curer, heatable syringe, single & automatic multi-layer dispensers and atmosphere controlled	Foot pedal, removable touchscreen, Bluetooth communication, fume exhaust adaptor, bowl liners and dispensers	IR heating and UV curing, wireless remote operation, auto dispenser, bowl liners, PC Connectivity, UV lid
Requires		External vacuum pump and compressor	External vacuum pump

SCS models

6800 series

- Precise control of spin speed & acceleration/deceleration rates.
- Up to 9,999 RPM of rotational speed.
- 8" or 12" PTFE-coated bowl.
- Stores & executes up to 3 recipes with 8 steps each.
- Max wafer diameter of 6" or 10" programmable.
- Requires external vacuum pump & compressor.
- Dispenser options available



G4 series

- Fully programmable.
- Available with 8" or 12" PTFE coated bowl sizes.
- Removable touchscreen tethered with 6ft cable.
- Up to 9,999 RPM of rotational speed.
- Requires external vacuum pump and compressor.
- Stores & executes up to 30 programs with 20 steps each.
- Closed-loop servomotor for precise speed regulation.
- Rear bowl drain port.
- Tempered glass or impact-resistant PVC lid, & dispenser options available



MTI models

VTC-XXXXA Series

- Non-programmable
- Accommodates up to 8" wafers
- Vacuum or non-vacuum chucks
- 8,000 RPM maximum rotational speed
- Two-stage spin control recipe
- Glovebox and Ar gas compatible



VTC-XXXPA Series

- Programmable
- Accommodates up to 8" wafers
- Vacuum chucks
- 12,500 RPM maximum rotational speed
- Corrosion proof, atmosphere controlled, Hi-speed & UV drying options available
- Save up to 12 distinct multi-step recipes
- Glovebox and Ar gas compatible



Navson models

NT Series

- Programmable
- Stores multi-step recipes
- 4", 8" and 12" PTFE coated or PP bowls
- Vacuum or non-vacuum chucks
- 10, 000 RPM maximum rotational speed
- Impact resistant lid, PC software, dispenser, Nitrogen purge, removable touchscreen, IR heating, UV curing & full PP working chamber options available
- Glovebox compatible



NTC Series

- Programmable with wireless functionality
- PP working chamber & chassis for zero metal contamination
- Stores multi-step recipes
- 8" and 12" PP bowls
- Vacuum or non-vacuum chucks
- 12, 000 RPM maximum rotational speed
- Centering tool, edge beader, liners, PC software, dispenser, removable touchscreen, IR heating, and UV curing options available
- Glovebox & Cleanroom compatible



Chucks

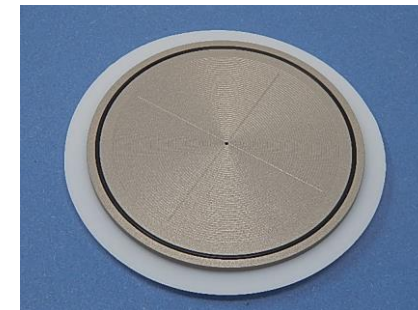
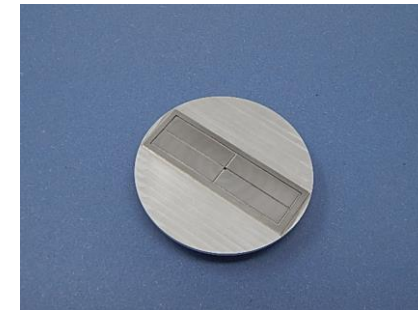
Achieving a uniform film is dependent on how well your substrate is held during rotation. At **PI-KEM**, we offer standard and custom designed chucks to ensure you get the best coating results.

Our chuck range includes:

- **Geometries:** Circular, Rectangular, or Square.
- **Profiles:** Grooved, non-grooved, or porous surfaces.
- **Mechanical Supports:** Vacuum-free pins, fingers, & custom recessed pockets.
- **Materials:** Aluminum, stainless steel, Delrin
- **Substrate Attachment:** Vacuum & non-vacuum, with or without O-rings

For chuck quotations we need to know:

- ✓ Your substrate material and dimensions
- ✓ Your coating materials



Next Steps...

The right equipment is more than just a spot filler on your lab bench - it boosts your research, stops material waste and ensures you get consistent results every day. We are ready to help you configure the perfect setup, from standard units to bespoke engineered chucks.



1. Get in touch

Our team will be happy to discuss your project aims, deadlines and budget and begin working on a proposal for you



2. Share your specifications

Tell us about your substrates and the chemicals you plan to use for your specific thin-film goals.



Review Proposal

Our team will match your specifications to the ideal system setup, balancing performance with your budget.



4. Commissioning

Receive your system, with the full confidence, that our team are available to assist with any queries you may have

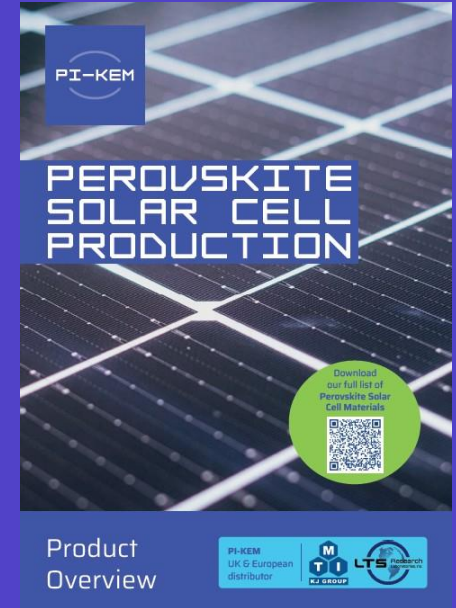
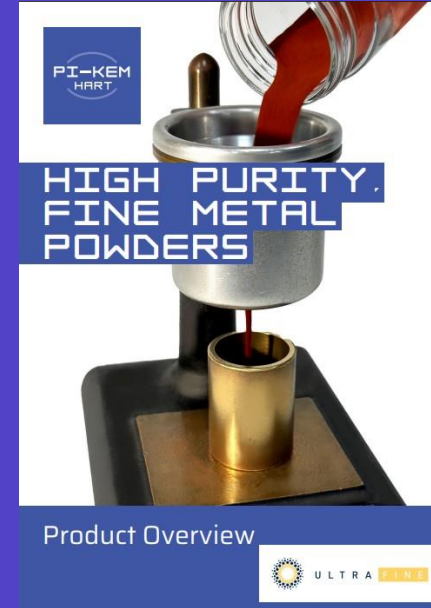


5. Future Development

Our team will stay in touch and support with any additional accessories or chucks you may need as your work evolves



Our Wider Product Range





DISCOVER MORE

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