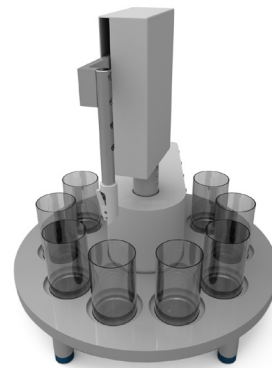


 **KSV NIMA** | Dip Coaters

Precision deposition



Single Vessel Small



Multi Vessel Small



Single Vessel Medium/Large



Single Vessel Extra Large



Multi Vessel Medium/Large

KSV NIMA Dip Coaters

KSV NIMA Dip Coaters are robust computer controlled instruments for precise thin film deposition. We provide solutions for the dip coating of small to large samples in either single or multiple vessels which is suitable for both simple and complex vessel sequencing.

Applications

KSV NIMA Dip Coaters are ideal instruments for a number of applications ranging from the development of functional coatings to the study of smart surfaces. Dip coating is used in a number of industries and fields of research including electronics, paints and biomaterials. KSV NIMA Dip Coaters are designed to deposit layers of materials in a controlled and repeatable way. It is possible to deposit films of various thicknesses, from monolayers to multilayered structures. The following surface coatings can, for example, be created:

- Sol-gel coatings
- Layer-by-layer assemblies
- Self-assembled monolayers

Product range

KSV NIMA Dip Coaters range from compact instruments for coating small samples in a single vessel to more complex systems enabling horizontal and vertical movement for multi-vessel operations and coating of large samples.

Our Dip Coater range is divided into two types, either single or multiple vessel systems. Single Vessel Dip Coaters are used to deposit from one solution while the Multiple Vessel Dip Coaters allow using many solutions which can include cleaning or rinsing. The "single vessel" and "multi-vessel" categories offer Small, Medium and Large systems to cater for a large range of sample sizes. A Single Vessel Dip Coater is also available for Extra Large samples. You can choose from the Dip Coater systems for your required sample weight, sample size, number of samples, dipper movements and number of vessels required (please see tables for exact specifications).

All KSV NIMA Dip Coaters come complete with software, computer interface with USB connection, instruction manual and solution vessels.

SINGLE VESSEL SYSTEMS SPECIFICATIONS

| | Small | Medium | Large | Extra Large |
|--|---------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| SAMPLE SPECIFICATIONS | | | | |
| Weight (g) | 0...150 | 0...500 | 0...500 | 0...2500 |
| Height (mm) | 15...140 | 25...300 | 25...500 | 25...1000 |
| Width (mm) | 5...150 | 5...400 | 5...400 | 5...600 |
| Thickness (mm) | 0.15...3 | 0.15...15 | 0.15...15 | 0.15...15 |
| Number of samples | 1, 2*, 3* (*as an option) | 1, 6*, 10* (*as an option) | 1, 6*, 10* (*as an option) | 1, 6*, 10* (*as an option) |
| OTHER INSTRUMENT SPECIFICATIONS | | | | |
| Dipping speed (mm/min) | 0.1...100 (0.2...200 as an option) | 1...1000 | 1...1000 | 1...1500 |
| Dimensions (L x W x H mm) | 275 x 154 x 420 | 490 x 410 x 1200 | 490 x 410 x 1800 | 690 x 606 x 2650 |



KSV NIMA Interface Unit

The KSV NIMA Interface Unit connects the computer with KSV NIMA Dip Coaters with the exception of the KSV NIMA Dip Coater Single Vessel Small. It displays real time dipper position and speed and has a spill-proof membrane keyboard. It allows convenient control right next to the instrument. The system includes a temperature probe for liquid temperature measurement. The software and Interface Unit have built in capabilities for a pH probe and magnetic stirrer.



Dip Coaters for single vessel sequencing

KSV NIMA Dip Coater Single Vessel Small

KSV NIMA Dip Coater Single Vessel Small is a compact Dip Coater enabling precise coatings of small samples (max. H140 x W150 x T3, 150g). The computer controlled dipping mechanism can be equipped with 1 to 3 sample holders for simultaneous dipping of several samples. The adjustable dipping speed (0.1 to 100 mm/min) can be doubled as an option to reach up to 200 mm/min. This Dip Coater comes with one sample holder (two additional sample holders can be added as an option) and a 70 mm diameter glass vessel.

KSV NIMA Dip Coater Single Vessel Medium / Large

KSV NIMA Dip Coater Single Vessel Medium and KSV NIMA Dip Coater Single Vessel Large are intended for coating large samples in one vessel. The only difference between the two systems is their height enabling coating of a 300 mm high sample with the Medium version (max. H300 x W400 x T15, 500g) and up to 500 mm high with the Large version (max. H500 x W400 x T15, 500 g). A single sample clip is provided with the instrument. A multisample clip is available as an accessory to enable simultaneous coating of 6 or 10 samples. The space available between the 2 legs of the Dip Coater stand is 400 mm. The Dip Coater comes with the KSV NIMA Interface Unit.

KSV NIMA Dip Coater Single Vessel Extra Large

The KSV NIMA Dip Coater Single Vessel Extra Large (XL) is built for precise coating of very large and/or heavy samples (max. H1000 x W400 x T15 mm, 2.5 kg). A single sample clip is provided with the instrument. A multisample clip is available as an accessory to enable simultaneous coating of 6 or 10 samples. The space available between the 2 legs of the Dip Coater stand is 600 mm. The Dip Coater comes with the KSV NIMA Interface Unit.

MULTIVESSEL SYSTEMS SPECIFICATIONS

| | Small | Medium | Large |
|--|-------------------------------------|-------------------------------|-------------------------------|
| SAMPLE SPECIFICATIONS | | | |
| Weight (g) | 0...150 | 0...500 | 0...500 |
| Height (mm) | 10...70 | 25...300 | 25...500 |
| Width (mm) | 5...45 | 5...950 | 5...950 |
| Thickness (mm) | 0.15...3 | 0.15...15 | 0.15...15 |
| Number of samples | 1 | 1, 6*, 10* (*as an option) | 1, 6*, 10* (*as an option) |
| OTHER INSTRUMENT SPECIFICATIONS | | | |
| Dipping speed (mm/min) | 0.1...108 | 1...1000 | 1...1000 |
| Horizontal motion type | rotating dipper (max. 8 vessels) | linear (0...800 mm) | linear (0...800 mm) |
| Horizontal speed (mm/min) | fixed rotational speed | 1...1500 | 1...1500 |
| Dimensions (L x W x H mm) | 330 x 330 x 341 | 1210 x 510 x 1200 | 1210 x 510 x 1800 |

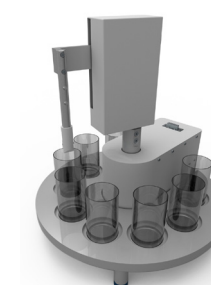
Dip Coaters for multiple vessel sequencing

KSV NIMA Dip Coater Multi Vessel Small

KSV NIMA Dip Coater Multi Vessel Small is a unique instrument for coating small samples (max. H70 x W45 x T3, 150g) when multi-vessel sequencing is required. The unique design has a central mounted dipping mechanism that rotates around eight stationary vessels (diameter 48 mm, height 80 mm, contain up to 100 ml) for multi programmable deposition/rinse cycles. Due to the unique design we are able to offer, as an option, temperature control on the vessels. A sample holder is attached to the dipping arm with a locking screw for easy substrate clamping and removal. It has an adjustable starting height to maximize the available submersion depth. The software enables control of the upper and lower resting positions and resting periods, up and down stroke speeds, number of dips and dipping positions. The KSV NIMA Interface Unit and a magnetic stirrer that rotates with the dipping mechanism are included.

KSV NIMA Dip Coater Multi Vessel Medium / Large

KSV NIMA Dip Coater Multi Vessel Medium is designed for coating medium to large samples (max. H300 x W950 x T15, 500g) using multi-vessel sequencing. KSV NIMA Dip Coater Multi Vessel Large enables even larger sample coating (max. H500 x W950 x T15, 500g) with the maximum sample height increased from 300 mm to 500 mm. Both systems offer programmable dipping speed and horizontal motion for precise and versatile sequencing. A single sample clip is provided with the instrument. A multisample clip is available as an accessory to enable simultaneous coating of 6 or 10 samples. The space available between the 2 legs of the Dip Coater stand is 950 mm. The Dip Coater comes with the KSV NIMA Interface Unit.



Accessories

Accessories are available to add further capabilities to your KSV NIMA Dip Coaters: vessels, thermostated vessels, vacuum pump based horizontal dipping clamp for horizontal deposition on light samples, active vibration isolation system to eliminate disturbing vibrations caused by other instruments, traffic or air conditioning system.

Depending on your system, you can also choose from a range of single and multiple sample clips, temperature probe, pH probe, magnetic stirrer and cabinets.

For complete accessory descriptions, please visit the KSV NIMA Dip Coater product page at biolinscientific.com/ksvnima.



Standard single sample clip provided with all the KSV NIMA Dip Coaters (except the Single Vessel Small and the Multi Vessel Small).



Example of multiple sample clip available as an accessory for all Dip Coaters except the Multi Vessel Small. The multiple sample clip comes with 6 (picture) or 10 clips. Each clip can hold up to 150 g.

Product benefits

All KSV NIMA Dip Coaters are programmable computer controlled instruments built for homogeneous deposition and repeatable operations. Their main advantages are:

Flexible programming of dipping sequences

The Windows-based Dip Coating software enables easy programming of a dipping sequence into either single or multiple vessels. The dipping sequences can be stored in the PC for further utilisation. Software-controlled deposition features include setting the substrate resting positions, immersion speed, submersion period, withdrawal speed, drying period and number of dip cycles, to name a few.

Vibration free immersion and withdrawal

The dipping mechanism enables vibration free immersion and withdrawal of samples into the liquid vessels for precise and uniform coatings.

Versatile and robust instrument

The range of sample holders and accessories enable various configurations fitting a wide range of experimental requirements. Durable materials were chosen to make our Dip Coaters a safe long-term investment.

Specifications and appearance are subject to change without prior notice. Biolin Scientific shall not be liable for any errors in this document.



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