Yellow Labware
Powered by Inovenso

PRODUCT CATALOG

Human-Centered Innovation

www.yellowlabware.com

Yellow Labware: Redefining Excellence in Laboratory Instrumentation

Since 2010, Inovenso has been manufacturing laboratory electrospinning devices that are now used in more than **60 countries worldwide.** Our instruments have been operating reliably for many years in numerous research and development laboratories, supporting scientists and innovators across diverse fields.

Through close collaboration with our customers, we have gained deep insights into laboratory needs and user expectations. This strong connection has shaped our understanding of how equipment should perform — not only in precision and reliability but also in user experience. Building upon this expertise, we founded **Yellow Labware** — a brand dedicated to designing and producing high-quality general laboratory instruments. Every product we develop features intuitive, user-centered interfaces and durable mechanical components, ensuring seamless integration into the laboratory environment and long-lasting, trouble-free operation.

With Yellow Labware, our goal is to combine engineering excellence, ergonomic design, and reliability to empower researchers in achieving better results — efficiently and effortlessly.

What Makes Yellow Labware Different?

1. Rooted in Research and Development
Yellow Labware is more than a manufacturer — we are a team that originates from a strong R&D culture. Having used our own equipment in research environments for many years, we deeply understand the practical needs and expectations of scientists and engineers.
Through the close relationships we have built with our customers, we gain direct insight into laboratory challenges and workflows. This enables us to design and produce instruments that precisely meet real-world laboratory demands — not just technically, but functionally and ergonomically.

2. User Experience at the Core of Design
We believe that the evolution of modern technology demonstrates the importance of creating devices that do more than simply perform a function. At Yellow Labware, we design instruments with intuitive, adaptive, and natural user interfaces, allowing operators to interact with our devices as effortlessly as using their own hands. Our dedicated design teams invest significant effort in developing seamless human–machine interaction, ensuring that every product feels familiar, responsive, and easy to master from the very first use.

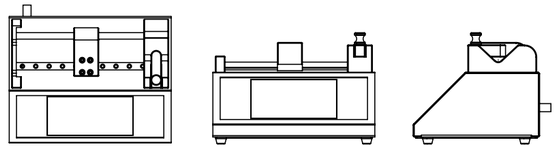
3. Global Reach, Local Support
With operational units in the United States, Türkiye, and South Korea, and an extensive distributor network across the globe, Yellow Labware provides accessible sales and after-sales support in every major market. This global presence allows us to deliver not only high-quality products but also responsive service and technical assistance, ensuring our customers receive consistent, professional support wherever they are.

USER-FRIENDLY INTERFACE

Unique
User Interface

SYRINGE PUMPS

IPS 12 SERIES



IPS-12 Syringe Pump

Single Channel Infusion Pump

The IPS-12 is a compact, single-channel unit designed for basic infusion-type processes.
It offers precise and stable flow control with a cost-effective structure.
Ideal for simple, consistent and repeatable fluid handling applications.

IPS-12 Syringe Pump Specifications

SYRINGES	
CAPACITY	1
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:170 H:137 mm
WEIGHT	2.1 kg (4.6 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” touch display with user-friendly interface**
- **Single-channel, compact, and cost-effective design**
- **Precise and stable flow control for basic processes**

IPS-12R Syringe Pump

Single Channel Infusion/Withdrawal Pump

The IPS-12R enables both infusion and withdrawal operations in a single channel. Flow rate and direction can be easily adjusted during use. It is suitable for applications that require bidirectional and flexible flow control.

IPS-12R Syringe Pump Specifications

SYRINGES	
CAPACITY	1
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:170 H:137 mm
WEIGHT	2.2 kg (4.8 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” intuitive touchscreen control**
- **Supports both infusion and withdrawal functions**
- **Adjustable flow rate during operation for flexible control**

IPS-12R

IPS-12S Syringe Pump

Single Channel Infusion Pump with Recipe Memory

The IPS-12S allows users to store up to 5 custom recipes and perform up to 50 repeat cycles automatically.
This makes it ideal for repetitive or automated processes.
Compact, reliable and efficient for small-scale production or testing setups.

IPS-12S Syringe Pump Specifications

SYRINGES	
CAPACITY	1
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)

FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%

MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (44 lbs)

GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	Yes
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:170 H:137 mm
WEIGHT	2.1 kg (4.6 lbs)

OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” touchscreen with easy recipe setup**
- **Stores up to 5 recipes and runs up to 50 repeat cycles**
- **Ideal for automated and repetitive operations**

IPS-12RS Syringe Pump

Single Channel Infusion/Withdrawal Pump with Recipe Management

The IPS-12RS combines bidirectional operation with programmable recipe control. Up to 5 recipes can be saved and repeated up to 50 times automatically. It's the most advanced model in the IPS-12 range, built for automated and flexible process control.

IPS-12RS Syringe Pump Specifications

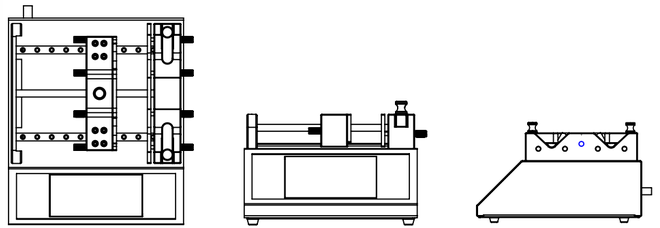
SYRINGES	
CAPACITY	1
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	Yes
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:210 L:170 H:137 mm
WEIGHT	2.2 kg (5 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3" user-friendly color display**
- **Infusion and withdrawal with recipe management**
- **Supports up to 5 stored recipes and 50 repeat cycles**

IPS-12RS

SYRINGE PUMPS

IPS 13 SERIES



IPS-13 Syringe Pump

Simultaneous Dual Channel Infusion Pump

The IPS-13 features two synchronized channels that operate simultaneously for balanced flow control. Compact and cost-effective, it ensures consistent performance across both channels. Perfect for dual-stream or parallel process operations.

IPS-13 Syringe Pump Specifications

SYRINGES	
CAPACITY	2 Interdependent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (pusher block force for 2 syringes) (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:200 H:143 mm
WEIGHT	2.9 kg (6.3 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” touchscreen display with simple control interface**
- **Dual-channel system operating simultaneously**
- **Compact and reliable for synchronized flow control**

IPS-13

IPS-13R Syringe Pump

Simultaneous Dual Channel Infusion/Withdrawal Pump

The IPS-13R supports infusion and withdrawal on two synchronized channels. Each operates together with adjustable flow rate and direction. A practical choice for processes that require coordinated, bidirectional control.

IPS-13R Syringe Pump Specifications

SYRINGES	
CAPACITY	2 Interdependent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (pusher block force for 2 syringes) (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:211 L:250 H:143 mm
WEIGHT	3.2 kg (7 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” intuitive touch display**
- **Dual synchronized infusion and withdrawal operation**
- **Adjustable flow direction and rate for both channels**

IPS-13R

IPS-13S Syringe Pump

Simultaneous Dual Channel Infusion Pump with Recipe Memory

The IPS-13S includes recipe memory for up to 5 stored programs and 50 repeat cycles. Its simultaneous dual-channel system offers synchronized and repeatable operation. Designed for efficient process automation and workflow consistency.

IPS-13S Syringe Pump Specifications

SYRINGES	
CAPACITY	2 Interdependent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (pusher block force for 2 syringes) (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	Yes
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:250 H:143 mm
WEIGHT	2.9 kg (6.3 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” touchscreen with built-in recipe memory**
- **Stores 5 recipes, supports 50 repeat cycles**
- **Automated simultaneous dual-channel operation**

IPS-13S

IPS-13RS Syringe Pump

Simultaneous Dual Channel Infusion/Withdrawal Pump with Recipe Management

The IPS-13RS combines synchronized dual-channel control with programmable recipe management. Up to 5 recipes can be stored and executed automatically for 50 repeat cycles. It's the most advanced version in the IPS-13 line, ideal for automated bidirectional processes.

IPS-13RS Syringe Pump Specifications

SYRINGES

CAPACITY	2 Interdependent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)

FLOW RATE

MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%

MOTOR SPECIFICATIONS

MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg (pusher block force for 2 syringes) (44 lbs)

GENERAL SPECIFICATIONS

RECIPE SAVE-RECALL	Yes
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:211 L:250 H:143 mm
WEIGHT	3.2 kg (7 lbs)

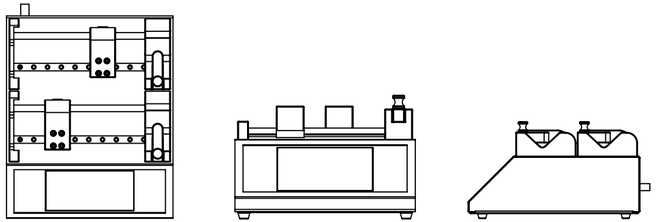
OPERATING CONDITIONS

OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3" color touchscreen interface**
- **Dual synchronized infusion/withdrawal with recipe control**
- **Full automation for repeatable and precise processes**

SYRINGE PUMPS

IPS 14 SERIES



IPS-14 Syringe Pump

Independent Dual Channel Infusion Pump

The IPS-14 provides two fully independent channels, each capable of separate operation. Compact yet powerful, it allows distinct control of both channels for versatile process management. Ideal for multi-task or parallel setups.

IPS-14 Syringe Pump Specifications

SYRINGES	
CAPACITY	2 Independent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg for each syringe (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:257 H:143 mm
WEIGHT	3.3 kg (7.2 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” touchscreen with independent channel control**
- **Two channels operate completely separately**
- **Compact and efficient design for versatile use**

IPS-14R Syringe Pump

Independent Dual Channel Infusion/Withdrawal Pump

The IPS-14R supports infusion and withdrawal on two independent channels. Each channel's flow direction and rate can be set individually, offering maximum flexibility. Perfect for applications requiring distinct and adaptable dual-channel operation.

IPS-14R Syringe Pump Specifications

SYRINGES	
CAPACITY	2 Independent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg for each syringe (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	No
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:211 L:257 H:143 mm
WEIGHT	3.6 kg (8 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3" easy-to-use touchscreen display**
- **Independent infusion and withdrawal control for each channel**
- **Adjustable flow direction and speed per channel**

IPS-14S Syringe Pump

Independent Dual Channel Infusion Pump with Recipe Memory

The IPS-14S allows up to 5 stored recipes and 50 repeat cycles per channel. Each channel can be controlled independently, providing full flexibility in automated processes. Suitable for repeatable and efficient multi-channel workflows.

IPS-14S Syringe Pump Specifications

SYRINGES	
CAPACITY	2 Independent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg for each syringe (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	Yes
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:200 L:257 H:137 mm
WEIGHT	3.3 kg (7.2 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” touchscreen with user-friendly interface**
- **Up to 5 recipes and 50 repeat cycles per channel**
- **Full independent dual-channel automation**

IPS-14RS Syringe Pump

Independent Dual Channel Infusion/Withdrawal Pump with Recipe Management

The IPS-14RS combines bidirectional flow and recipe management across two completely independent channels. Users can save up to 5 recipes and run up to 50 repeat cycles automatically. It is the most advanced and versatile model in the IPS-14 series.

IPS-14RS Syringe Pump Specifications

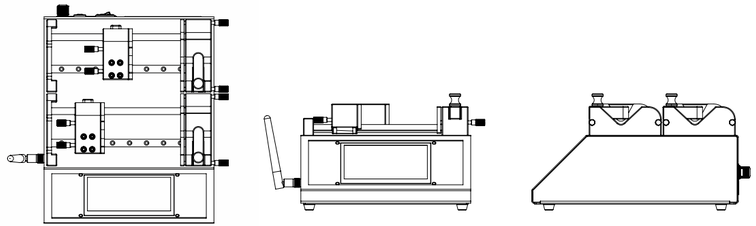
SYRINGES	
CAPACITY	2 Independent
TYPE	Glass, plastic, steel
MIN SIZE	Hamilton 0.5 µl (ID:0.103mm)
MAX SIZE	Monoject 140 ml (ID:38mm)
FLOW RATE	
MIN	17.89 pl/min (Hamilton 0.5 µl)
MAX	121.51 ml/min (140 ml Monoject Syringe)
ACCURACY	< 3%
REPRODUCIBILITY	< 3%
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
MOTOR DRIVE CONTROLLER	Microcontroller with Microstep Drive
STEP RESOLUTION (TRAVEL/MICROSTEP)	357 nm/µstep
MIN STEP RATE	10 sec/µstep
MAX STEP RATE	200 µsec/µstep
MIN LINEAR SPEED	2.14 µm/min
MAX LINEAR SPEED	107.14 mm/min
LINEAR FORCE	20 kg for each syringe (44 lbs)
GENERAL SPECIFICATIONS	
RECIPE SAVE-RECALL	Yes
POWER SUPPLY	12 VDC 1A (110-240 VAC adapter included)
DIMENSIONS	W:211 L:257 H:137 mm
WEIGHT	3.6 kg (8 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	-10 to 50 °C
STORAGE TEMPERATURE	-30 to 85 °C
OPERATING HUMIDITY	RH 10% - RH 90% (non-condensed)
STORAGE HUMIDITY	RH 10% - RH 90% (non-condensed)

- **4.3” interactive touch display**
- **Independent bidirectional control with recipe management**
- **Supports 5 recipes and 50 repeat cycles for each channel**

IPS-14RS

SMART SYRINGE PUMPS

IPS-15-16 SMART SERIES



IPS-15 Syringe Pump

Single Channel Infusion/Withdrawal Pump with Recipe Management and Wi-Fi Control

The IPS-15 includes all advanced features of the IPS-12RS, offering bidirectional flow control and full recipe management. In addition, it features built-in Wi-Fi connectivity, allowing remote operation via the **Inovenso Mobile App.** Users can control and monitor processes directly from their smartphones, providing enhanced convenience and flexibility. Ideal for automated and connected workflows requiring single-channel precision.

IPS-15 Syringe Pump Specifications

FLOW CONTROL	
OPERATION MODES	Single syringe channel (infusion/withdrawal)
FLOW ADJUSTMENT	Real-time control via touchscreen or Wi-Fi
RECIPE FUNCTION	Save and execute automated workflows
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
CONTROL SYSTEM	Microcontroller-based drive
FLOW RESOLUTION	Microstep precision (357 nm/µstep)
LINEAR FORCE	20 kg (44 lbs)
DIRECTION	Forward / Reverse
GENERAL SPECIFICATIONS	
DISPLAY	4.3" Color Resistive
CONNECTIVITY	Wi-Fi (SSL-encrypted)
DIMENSIONS	W 200 × L 257 × H 137 mm
WEIGHT	3.0 kg (6.6 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	–10 °C to 50 °C
STORAGE TEMPERATURE	–30 °C to 85 °C
STORAGE HUMIDITY	RH 10 % – 90 % (non-condensed)

- **4.3” touchscreen with Inovenso’s user-friendly interface**
- **Same advanced functions as IPS-12RS**
- **Built-in Wi-Fi for remote operation via Inovenso Mobile App**
- **Full control and monitoring from your smartphone & tablet**
- **Grouped Operation: Simultaneous control of multiple pumps via one interface**

IPS-16 Syringe Pump

Dual Channel Infusion/Withdrawal Pump with Wi-Fi & Recipe Management

The IPS-16 inherits all functions of the IPS-14RS, including independent dual-channel bidirectional control and advanced recipe management. It adds wireless connectivity, enabling seamless remote operation through the **Inovenso Mobile App.** Each channel can be monitored and controlled individually from a mobile device. This model combines high-level automation with smart, wireless process control for ultimate flexibility.

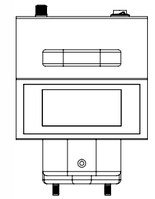
IPS-16 Syringe Pump Specifications

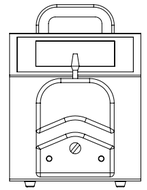
FLOW CONTROL	
OPERATION MODES	Dual syringe channels (independent or synchronized)
FLOW ADJUSTMENT	Real-time control via touchscreen or Wi-Fi
RECIPE FUNCTION	Save and execute automated workflows
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
CONTROL SYSTEM	Microcontroller-based drive
FLOW RESOLUTION	Microstep precision (357 nm/µstep)
LINEAR FORCE	20 kg independently for both syringes (44 lbs)
DIRECTION	Forward / Reverse
GENERAL SPECIFICATIONS	
DISPLAY	4.3" Color Resistive
CONNECTIVITY	Wi-Fi (SSL-encrypted)
DIMENSIONS	W 200 × L 257 × H 137 mm
WEIGHT	3.0 kg (6.6 lbs)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	–10 °C to 50 °C
STORAGE TEMPERATURE	–30 °C to 85 °C
STORAGE HUMIDITY	RH 10 % – 90 % (non-condensed)

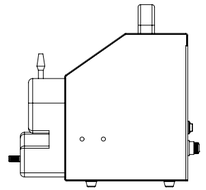
- **4.3” touchscreen with intuitive independent control**
- **All features of IPS-14RS plus Wi-Fi connectivity**
- **Operate and monitor each channel remotely via Inovenso Mobile App**
- **Designed for smart, wireless, and flexible process management**
- **Grouped Operation: Control and synchronize multiple channels from a single interface**

PERISTALTIC PUMPS

IPS-20-21 SERIES







IPS-20 Peristaltic Pump

Programmable peristaltic pump for smooth and precise fluid transfer

- Wide Flow Range
- Accurate, Pulse-Free Delivery
- Chemical-Resistant Design

IPS-20 Peristaltic Pump Specifications

FLOW RATE	
SPEED RANGE	0.1–600 RPM
SPEED RESOLUTION	0.1 RPM
FLOW RATE	Up to 2280 mL/min
MIN FLOW RATE	0.006 mL/min
FLOW CALIBRATION MODE	Available
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
CONTROL SYSTEM	Microprocessor-based controller
DIRECTION	Reversible (forward/reverse)
OPERATION MODES	Continuous / Timed / Volume-based
LEARN & REPEAT MODE	Available
RECIPE SAVE & RECALL	Available
FAST-RUN MODE	Available
CONSTRUCTION & MATERIALS	
PUMP HEAD HOUSING	PPS (Polyphenylene Sulfide)
ROLLERS	304 Stainless steel
BODY MATERIAL	Powder-coated steel
CHEMICAL RESISTANCE	Heat, solvent, corrosion, and flame resistant
OPERATING CONDITIONS	
OPERATING TEMPERATURE	0-40 (°C)
OPERATING HUMIDITY	< 80 % RH (non-condensed)
STORAGE HUMIDITY	–10 – 60 °C
POWER SUPPLY	110-240 VAc 56/60 Hz (variable plug type)

Wide Tubing Compatibility & Easy Installation

Compatible with various tubing sizes to match your application:

Tubing Size	Flow Range (ml/min)	ID (mm)	Max Flow (ml/min)
13#	0.006 – 38	0.8	42
14#	0.025 – 150	1.6	162
19#	0.042 – 250	2.4	306
16#	0.077 – 460	3.1	492
25#	0.16 – 960	4.8	1020
17#	0.26 – 1600	6.4	1740
18#	0.36 – 2280	7.9	2280

- **1 channel**
- **4.3” Color Touchscreen Interface**
- **Microprocessor-controlled operation**
- **User-friendly programmable software**
- **Adjustable flow rate even during operation**
- **Reversible flow for easy cleaning**

IPS-21 Peristaltic Pump

Multi-channel peristaltic pump for precise and reliable fluid transfer

- Multiple-Channel Operation
- Accurate, Pulse-Free Flow
- Chemical-Resistant Construction

IPS-21 Peristaltic Pump Specifications

FLOW RATE	
SPEED RANGE	0.1–100 RPM
SPEED RESOLUTION	0.1 RPM
FLOW RATE	Up to 36 mL/min (for ID:3mm tube)
FLOW CALIBRATION MODE	Available
MOTOR SPECIFICATIONS	
MOTOR TYPE	Stepper Motor
CONTROL SYSTEM	Microprocessor-based controller
DIRECTION	Reversible (forward/reverse)
OPERATION MODES	Continuous / Timed / Volume-based
LEARN & REPEAT MODE	Available
RECIPE SAVE & RECALL	Available
FAST-RUN MODE	Available
CONSTRUCTION & MATERIALS	
PUMP HEAD HOUSING	POM-White
ROLLERS	304 Stainless steel
BODY MATERIAL	Powder-coated steel
CHEMICAL RESISTANCE	Heat, solvent, corrosion, and flame resistant
CARTRIDGE TYPE	Ratchet type
CHANNEL NUMBER	6 Max
TUBING SIZE	ID ≤ 3.17 mm (0.8–1.0 mm wall thickness)
OPERATING CONDITIONS	
OPERATING TEMPERATURE	0-40 (°C)
OPERATING HUMIDITY	< 80 % RH (non-condensed)
STORAGE HUMIDITY	–10 – 60 °C

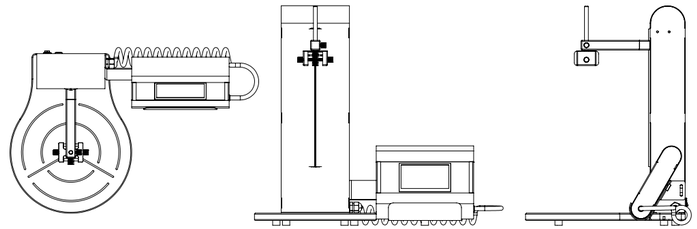
TUBING SIZE

Model	Tube	ID*wall thickness	Max speed	Max flow
DG (6)	0.5*0.8	0.5*0.8	100rpm	2ml/min
	1*1	1*1	100rpm	6ml/min
	2*1	2*1	100rpm	19ml/min
	2.4*0.8	2.4*0.8	100rpm	24ml/min
	3*1	3*1	100rpm	36ml/min

- **Multi-channel operation (up to 6 channels)**
- **4.3” Color TFT Touchscreen Interface**
- **Microprocessor software for automated control**
- **Adjustable flow rate during process**
- **Learn & Repeat Mode and Recipe Save & Recall**
- **Reversible flow for quick cleaning**

IPS-21

DIP COATER



IDC-20 Dip Coater

A precision-engineered lab-scale dip coating system for R&D labs, universities, and surface treatment applications

- Customizable dipping profiles
- Smooth and accurate vertical motion
- Chemical-resistant, durable construction

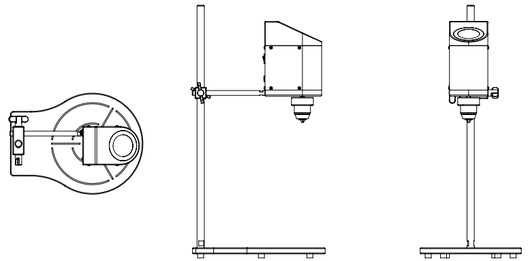
IDC-20 Dip Coater Specifications

MOVEMENT CONTROL	
ACTUATOR	DC Stepping Motor
MECHANISM	Lead Screw
STROKE LENGTH	200mm (7.87 in) (max)
DRAWING SPEED RANGE	0.0012–600 mm/min (0.000047–23.622 in/min)
USER INTERFACE	4.3- inch LCD Color Touchscreen
PROGRAM MEMORY	20 Programs X 999 cycles
CONSTRUCTION & MATERIALS	
BODY MATERIAL	Chemical-resistant metal construction
MAX LOAD CAPACITY	2 Kg (4.4 lbs)
WEIGHT	9 Kg (20 lbs)
DIMENSIONS	440 × 330 × 446 mm (H)
POWER & CONNECTIVITY	
POWER INPUT	110–220V, 50/60Hz
POWER CONSUMPTION	36W max (3A @ 220V)
PC CONNECTIVITY	Available

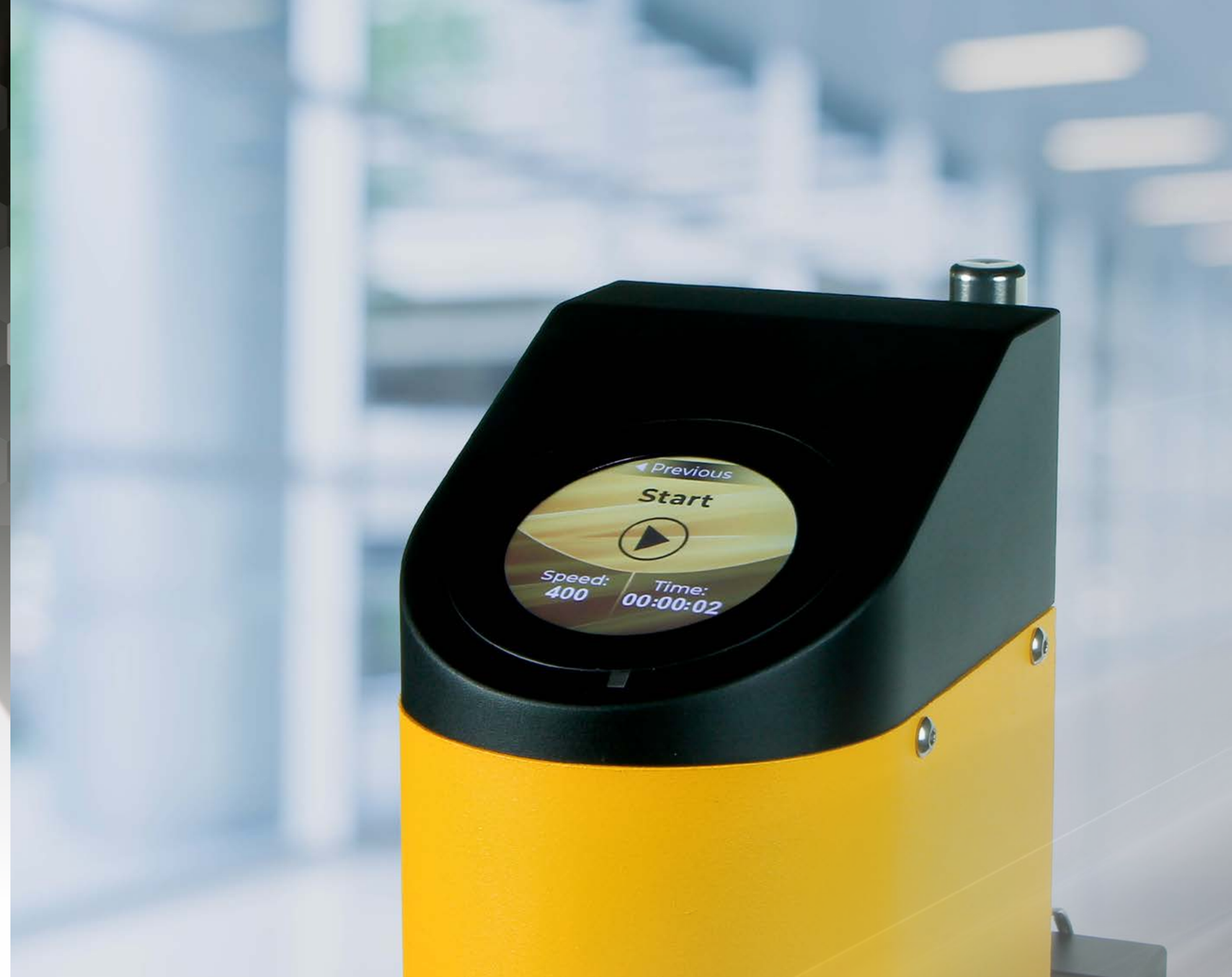
- **4.3” Color Touchscreen Interface**
- **Automatic & Manual Programming Modes**
- **Customizable Dipping Profiles (multi-stage, adjustable dwell times, precise speeds)**
- **Up to 20 Recipes, 999 Cycles Each**
- **Highly Chemical-Resistant Construction**
- **Separate Control Unit for Safe Operation**
- **Compact & Ergonomic Lab-Scale Design**

OVERHEAD STIRRERS

IMS SERIES



USER-FRIENDLY INTERFACE



IMS-01 Overhead Stirrer

A precision-engineered, lab-scale overhead stirring system designed for R&D laboratories, universities, and controlled mixing applications.

- Brushless DC motor for stable and reliable operation
- Wide speed range from 100 to 2000RPM
- Digital touchscreen control for precise speed adjustment

IMS-01 Overhead Stirrer Specifications

DESCRIPTION	Basic Low Torque Model
MOTOR	Brushless DC motor
RATED POWER (W)	50
RATED CURRENT (A)	3.3
RATED VOLTAGE (V)	24
TORQUE MAX (N·CM)	16
SPEED RANGE (RPM)	100–2000
OPERATION	Digital control via touchscreen
SETTING ACCURACY SPEED (%)	±2
VISCOSITY MAX (MPa.s)	10,000
MAX STIRRING VOLUME (H_2O, L)	13
RECIPE/RECALL MODE	No
BUZZER OPTION	No
STIRRING DIRECTION	CW
STIRRING ELEMENT FASTENING	Keyless chuck, easy to install and replace the shaft
CHUCK SHAFT RANGE (MM)	1-10
IMPELLER SHAFT LENGTH (CM)	27, 47
TIMER	Yes
POWER SUPPLY (VAC, HZ)	100~240 VAC, 50/60Hz
DIMENSIONS (W×H×D)	250×756×327.8 mm (9.84×29.76×12.91 in)
WEIGHT	7 kg (15.4 lb)
ACCESSORIES (STANDARD)	4-Blade Paddle Impeller (FP-60) Universal stand (Extension arm length: 60 cm)

• 4.3” Color Touchscreen Interface • Brushless DC Motor with Digital Speed Control

• Speed Range: 100–2000 RPM • Maximum Torque: 0.16 Nm

IMS-01

Yellow Labware

OVERHEAD STIRRERS

PROGRAMMABLE RECIPE FUNCTION

Save & repeat mixing protocols with precision

AUDIBLE BUZZER ALERT

End-of-process and safety notification system

CW / CCW DIRECTION CONTROL

Instant rotation direction change for advanced applications

IMS-02 Overhead Stirrer

A high-precision, digitally controlled overhead stirrer engineered for intelligent and repeatable laboratory mixing applications.

- Advanced programmable digital control for precise mixing profiles
- Instant CW/CCW directional switching with integrated audible alert
- High-stability brushless DC motor with advanced RPM regulation

IMS-02 Overhead Stirrer Specifications

DESCRIPTION	Advanced Low Torque Model
MOTOR	Brushless DC motor
RATED POWER (W)	50
RATED CURRENT (A)	3.3
RATED VOLTAGE (V)	24
TORQUE MAX (N·CM)	16
SPEED RANGE (RPM)	100–2000
OPERATION	Digital control via touchscreen
SETTING ACCURACY SPEED (%)	±2
VISCOSITY MAX (MPa.s)	10,000
MAX STIRRING VOLUME (H_2O, L)	13
RECIPE/RECALL MODE	Up to 4 Steps
BUZZER OPTION	Yes
STIRRING DIRECTION	CW/CCW
STIRRING ELEMENT FASTENING	Keyless chuck, easy to install and replace the shaft
CHUCK SHAFT RANGE (MM)	1-10
IMPELLER SHAFT LENGTH (CM)	27, 47
TIMER	Yes
POWER SUPPLY (VAC, HZ)	100~240 VAC, 50/60Hz
DIMENSIONS (W×H×D, MM - INCH)	250×756×327.8 mm (9.84×29.76×12.91 in)
WEIGHT (KG)	7.5 kg (16.5 lb)
ACCESSORIES (STANDARD)	4-Blade Paddle Impeller (FP-60) Universal stand (Extension arm length: 60 cm)

• Brushless DC Motor with Digital Control • Speed Range: 100–2000 RPM • Maximum Torque: 0.16 Nm

• Touchscreen-Based Operation • Universal Power Input (100–240 V, 50/60 Hz)

IMS-02

IMS-03 Overhead Stirrer

A high-performance overhead stirrer designed for high-viscosity and high-speed laboratory mixing applications requiring increased torque and power.

- High-power brushless DC motor for demanding mixing tasks
- Wide speed range up to 3000 RPM with digital touchscreen control
- Durable, chemical-resistant metal construction for lab use

IMS-03 Overhead Stirrer Specifications

DESCRIPTION	Basic High Torque Model
MOTOR	Brushless DC motor
RATED POWER (W)	105
RATED CURRENT (A)	6.4
RATED VOLTAGE (V)	24
TORQUE MAX (N·CM)	25
SPEED RANGE (RPM)	200–2500
OPERATION	Digital control via touchscreen
SETTING ACCURACY SPEED (%)	±2
VISCOSITY MAX (MPa.s)	17000
MAX STIRRING VOLUME (H_2O, L)	20
RECIPE/RECALL MODE	No
BUZZER OPTION	No
STIRRING DIRECTION	CW
STIRRING ELEMENT FASTENING	Keyless chuck, easy to install and replace the shaft
CHUCK SHAFT RANGE (MM)	1-10
IMPELLER SHAFT LENGTH (CM)	27, 47
TIMER	Yes
POWER SUPPLY (VAC, HZ)	100~240 VAC, 50/60Hz
DIMENSIONS (W×H×D, MM - INCH)	250×786×327.8 mm (9.84×30.94×12.91 in)
WEIGHT (KG)	7.5 kg (16.5 lb)
ACCESSORIES (STANDARD)	4-Blade Paddle Impeller (FP-60) Universal stand (Extension arm length: 60 cm)

• 4.3” Color Touchscreen Interface • Brushless DC Motor Technology (105 W) • Speed Range: 200–2500 RPM

• Maximum Torque: 0.25 Nm • Suitable for High-Viscosity Applications

IMS-03

PROGRAMMABLE RECIPE FUNCTION

Save & repeat mixing protocols with precision

CW / CCW DIRECTION CONTROL

Instant rotation direction change for advanced applications

AUDIBLE BUZZER ALERT

End-of-process and safety notification system

IMS-04 Overhead Stirrer

A high-performance, programmable overhead stirrer designed for high-viscosity laboratory applications requiring advanced control and operational flexibility.

- High-power brushless DC motor for demanding mixing applications
- Advanced touchscreen control with recipe and stirring direction options
- Durable, chemical-resistant metal construction for intensive lab use

IMS-04 Overhead Stirrer Specifications

DESCRIPTION	Advanced High Torque Model
MOTOR	Brushless DC motor
RATED POWER (W)	105
RATED CURRENT (A)	6.4
RATED VOLTAGE (V)	24
TORQUE MAX (N·CM)	25
SPEED RANGE (RPM)	200–2500
OPERATION	Digital control via touchscreen
SETTING ACCURACY SPEED (%)	±2
VISCOSITY MAX (MPa.s)	17000
MAX STIRRING VOLUME (H_2O, L)	20
RECIPE/RECALL MODE	Up to 4 Steps
BUZZER OPTION	Yes
STIRRING DIRECTION	CW/CCW
STIRRING ELEMENT FASTENING	Keyless chuck, easy to install and replace the shaft
CHUCK SHAFT RANGE (MM)	1-10
IMPELLER SHAFT LENGTH (CM)	27, 47
TIMER	Yes
POWER SUPPLY (VAC, HZ)	100~240 VAC, 50/60Hz
DIMENSIONS (W×H×D)	250×786×327.8 mm (9.84×30.94×12.91 in)
WEIGHT	7.5 kg (16.5 lb)
ACCESSORIES (STANDARD)	4-Blade Paddle Impeller (FP-60) Universal stand (Extension arm length: 60 cm)

• 4.3” Color Touchscreen Interface • Brushless DC Motor Technology (105 W) • Speed Range: 200-2500 RPM
• Maximum Torque: 0.25 Nm • Programmable Recipe & Stirring Direction Control

IMS-04

The smart cap design allows reagent or solvent addition during operation without stopping the mixing process.

Interchangeable shaft lengths adapt to different bottle sizes, and when required, the unit can also function as a conventional overhead stirrer for standard laboratory containers.

IMS-GL45 Overhead Stirrer

Precision Mechanical Stirring for Volatile and Viscous Systems.

The IMS-GL45 is a high-performance mechanical stirrer designed for direct integration with standard GL45 laboratory bottles. Its dedicated GL45 adapter enables powerful mixing inside sealed or semi-sealed containers, significantly reducing evaporation losses while maintaining process safety.

IMS-GL45 Overhead Stirrer Specifications

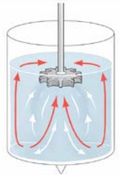
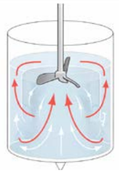
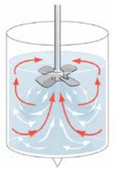
DESCRIPTION	Direct GL-45 bottle mounting for closed-vessel mixing with interchangeable shafts.
MOTOR	Brushless DC motor
RATED POWER (W)	105
RATED CURRENT (A)	6.4
RATED VOLTAGE (V)	24
TORQUE MAX (N·CM)	16
SPEED RANGE (RPM)	200–2500
OPERATION	Digital control via touchscreen
SETTING ACCURACY SPEED (%)	±2
VISCOSITY MAX (MPa.s)	17000
MAX STIRRING VOLUME (H_2O, L)	5
RECIPE/RECALL MODE	No
BUZZER OPTION	No
STIRRING DIRECTION	CW
STIRRING ELEMENT FASTENING	Integrated GL-45 direct-coupling interface for closed-vessel mixing with secure bottle attachment.
CHUCK SHAFT RANGE (MM)	1-10
IMPELLER SHAFT LENGTH (CM)	Based on bottle volume 100ml : 4cm, 250ml : 7.5cm, 500ml : 11cm, 1000ml : 15.5cm, 2000ml : 19cm, 5000ml : 25cm
TIMER	Yes
POWER SUPPLY (VAC, HZ)	100~240 VAC, 50/60Hz
DIMENSIONS (W×H×D)	250×756×327.8 mm (9.84×29.76×12.91 in)
WEIGHT	9 kg (20 lb)
ACCESSORIES (STANDARD)	Saw-Tooth Impeller (ST-30) Universal stand (Extension arm length: 34cm)

• 4.3” Color Touchscreen Interface • Brushless DC Motor Technology

• Speed Range: 200–2500 RPM • Maximum Torque: 0.16 Nm • Stirring Capacity up to 5 L

IMS-GL45

BLADES

	TYPE-1	TYPE-2	TYPE-3
			
NAME	Saw-Tooth High-Shear Dispersing Impeller	3-Blade Propeller Impeller	4-Blade Paddle Impeller
CODE	ST-30, ST-60	AP-60	FP-60
Blade Diameter (mm)	30, 60	30	30
Shear Level	High	Low to moderate	Moderate
Material	AISI 304 stainless steel	AISI 304 stainless steel	AISI 304 stainless steel
Typical Applications	Emulsification, suspension, pigment dispersion, disrupting solid agglomerates, paints, and cosmetics.	Homogenization, general blending, liquid-liquid mixing, drawing material from top to bottom.	Gentle stirring, heat exchange, preventing sedimentation, multiphase mixing
Performance Characteristics	Creates high local turbulence and strong shearing forces. Highly effective at breaking down particles in solid-liquid mixtures.	Efficient top-to-bottom circulation; low power consumption; uniform blending	Balanced circulation; stable mixing; improved bulk movement with moderate shear
Flow Pattern			
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Established 2026

More products are on the way.

Yellow Labware

Yellow Labware

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