

# Automated Solutions for NGS

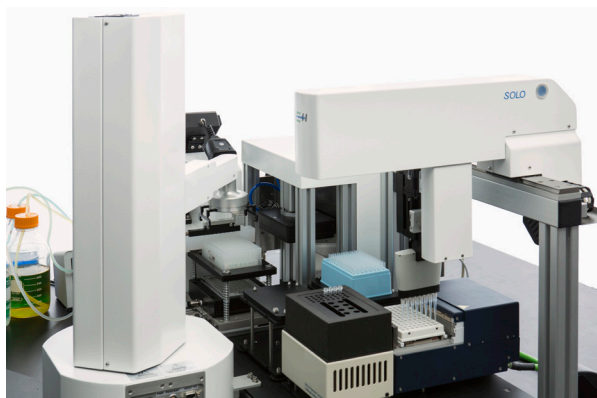
## Next Generation Sequencing Library Prep made Easy

The SOLO system is ideal for medium throughput laboratories and is well suited for preparing libraries for various applications such as exome, whole transcriptome and targeted resequencing. In addition, Hudson's new Synthetic Biology Workstation automates the entire portion of the pipeline from Gene Assembly through Plasmid Preparation.

**Automated DNA Library Prep:** work with standard third-party library prep kits. Ideal for converting a small amount of DNA input into indexed libraries for next-generation sequencing. Standardize processes and achieve more consistent results.

**Automated DNA Normalization:** Connect your microplate reader, or import your reader data to prepare a plate at a constant concentration.

**Magnetic bead (Ampure) Cleanup:** Perform library construction, indexing and PCR. Reduces hands-on time 50% when compared to a manual workflow.



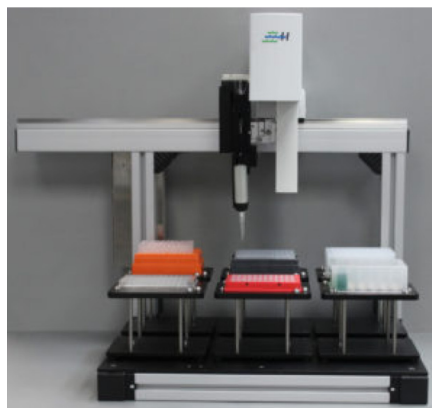
**Part of our new series of instruments designed to support the Synthetic Biology Pipeline.**

One flexible instrument to prepare DNA libraries and do extraction protocols for PCR Prep & PCR: The Solo Molecular Biology Workstation will do vector preparation, gene assembly, transformation and plating. After automated colony picking with the RapidPick, you'll incubate and return the culture block for plasmid preps. The Solo was made to perform at PCR volumes. It's easy, agile, and reliable.

### Additional Protocols for:

**Oligo Synthesis** – Downloads desired oligo formulations from a local file or the internet.

Converts the file information into specific instructions for an oligo synthesizer, as well as operator prompts to insure that the required materials are present.



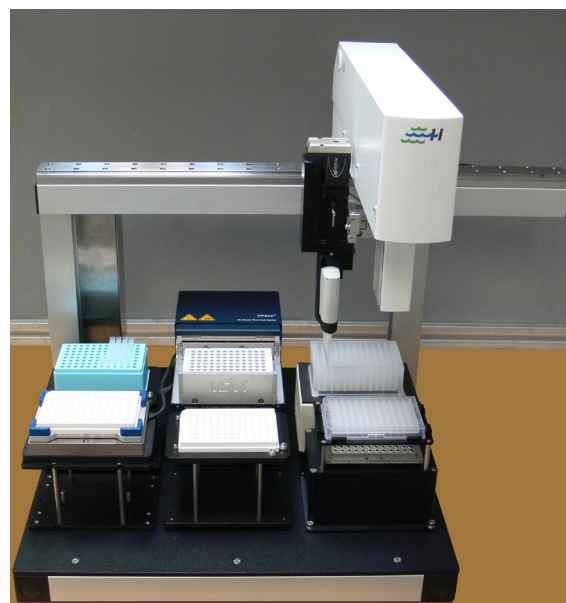
**Deprotection and Purification** – Elutes the synthesized oligos from their solid substrates, then deprotects them in a seamless, fully automated series of steps. These steps include a rinse under vacuum of the synthesizer columns, addition of deprotection reagents, sealing the collection plate (if necessary), performing the deprotection reaction, then unsealing the plate. All this is done in a hands-free automated process.

**Normalization** – Utilizing an absorbance plate reader and SoftLinx' ability to adapt its instrument instructions to the results of the reader, the system's SOLO pipettor performs a series of sample transfers and dilutions to achieve a normalized DNA concentration in every plate well.

**Automated Library Prep and Indexing** – The Solo is your favorite lab assistant for high-quality liquid handling in medium throughput - scan the barcode and start your protocol. Plus, achieve a normalized DNA concentration in every plate well.

**Pooling** – Following the downloaded sequence instructions provided at the beginning of the process, SoftLinX directs the system’s pipettor to pool the appropriate oligos to enable the final assembly process and achieve the full gene sequence desired.

**Gene Assembly** – The final step in the gene production process involves a combination of PCR heating and cooling steps with SoftLinX-directed pipetting of the appropriate reagents to create a completed gene assembly.



NGS Library Prep Workcell

**Lab Unit Operations:**

- Shaker, front left
- Sample plate, front center
- Magnetic bead workstation, front right
- Chilled reagent reservoir, rear right
- Inheco incubator, rear center
- Tip box, rear left

**SOLO Specifications**

<b>Dispensing</b>	Single channel: 1uL to 10 mL; optional pump assembly for bulk dispensing 8 & 12 channel: 50 uL, 100 uL, 200 uL, 300 uL and 1,000 uL pipette heads	
<b>Plate Capacity</b>	4 to 12 on-deck positions; up to 4 additional positions off deck	
<b>Plate Format</b>	SBS footprint; 8-, 24-, 96-, 384- shallow well and deep well; inquire for custom nests	
<b>Housing Material</b>	Powder-coated aluminum main deck; painted steel upper arm covers; machined aluminum structural components	
<b>Spill Protection</b>	No electronic components subject to spillage	
<b>Base Size</b>	21"W x 21"D x 22"H (Standard 6-position deck model)	
<b>Weight</b>	60lbs.	
<b>Computer Interface</b>	RS-232	
<b>Accessories</b>	<ul style="list-style-type: none"> <li>• Plate stacker and/or robotic arm</li> <li>• Liquid level detection</li> <li>• Thermal cycler</li> <li>• Heating/Cooling nests</li> </ul>	<ul style="list-style-type: none"> <li>• Shaker nest</li> <li>• Integrated bulk reagent dispensing</li> <li>• Filtration station</li> <li>• Magnetic nest</li> </ul>

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