

PLW20 Well Plate Loader

High Throughput Automatic Robotic Well Plate Loader

The PLW20 Well Plate Loader from Prior Scientific is an advanced robotic system for automatic slide handling. This rapid and efficient system is ideal for high throughput digital imaging and has the potential to provide complete, walk away convenience.





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Accurate loading for effective imaging

Many modern applications require the precise digital imaging of large numbers of well plates. By combining the well plate loader with other components of a Prior ProScan® system the end user gains a system specifically designed for high content screening applications. Included with the well plate loader is a custom ProScan HLD117 stage, which provides extremely precise positioning in the X and Y axes.

The PLW20 well plate loader has two stainless steel racks, allowing for easy cleaning and sterilisation. Up to 20 well plates up to 19mm high, either covered or uncovered, can be accommodated by the loader. The loader is designed to be compatible with a wide range of inverted microscopes, as well as with as wide a range of well plates as possible. The entire loading cycle is less than thirty seconds per well plate, whilst the three axes of the well plate loader are all encoded, ensuring perfect placement. The loader is stationary between operations, which along with the single metal plate which accommodates with both the loader and microscope, almost eliminates vibration during the imaging process.



Safeguarding Samples and Data Integrity

Well plates can represent a substantial investment in time and resources, and the well plate loader is designed to protect the well plates during the loading process. Multiple sensors ensure safe and accurate transfers between the holder and the microscope stage. The presence of the well plate racks is also monitored, which allows the system to respond intelligently if racks are changed in the middle of the run. A well plate detection system is able to automatically scan and quantify the number of well plates in each rack, as well as identify their location. An optional 2D barcode scanner is also available to ensure that the correct image is matched to the correct well plate.

Practical and Convenient

A comprehensive Software Development Kit is supplied free with the loader, allowing for simple and straightforward integration with third party software. Additionally, the well plate loader is fully compatible with the Prior ProScan system. Furthermore, the well plate loader is designed to be as unobstructive as possible in the laboratory, with very quiet operation and a small footprint of only 0.47m².

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Use with slides

Newly available from Prior Scientific is the PLW110. This allows the loader to load slides, as well as well plates, meaning that users using inverted microscopes to examine slides can now benefit from the same advantages offered by the well plate loader. No modification to the loader itself is needed, allowing the loader to be used in facilities which serve a large number of users with differing requirements.



Performance Specifications

| | |
|-------------------------------|---|
| Capacity | 20 well plates (in two racks of 10 plates in each rack) |
| Communications | USB communications |
| Scanning Stage Compatibility: | Compatible with ProScan HLD117 linear inverted stages |
| Footprint | 0.47m ² |
| Dimensions | 840 mm (W) x 550 mm (L) x 660 mm (H) |
| Input voltage | 100-240V AC |
| Regulatory Compliance | Fully CE compliant |
| Load/Unload Cycle Speed | 29 seconds |

Plate Management Systems

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|----------------------|--|
| Rack Sensor | Racks can be swapped whilst unit is running |
| Well Plate Detection | Racks are scanned for plates present. Plates are barcode read prior to loading for random access |
| Handling sensors | Well plate presence sensors are built into both the gripper arm and stage insert, for confirming safe and accurate transfer. |
| Barcode Readers | Optional 2D reader available. |

Ordering Information*

| Part Number | Description |
|-------------|---|
| PLW20 | Well Plate Loader System |
| PLW106 | Barcode reader for Well Plate Loader system |
| PLW110 | Slide holder for Well Plate Loader system |

* Please consult with your microscope dealer for advice on the appropriate objectives to use with the well plate loader



Prior Scientific Ltd

3-4 Fielding Industrial Estate • Wilbraham Road • Fulbourn • Cambridge • CB21 5ET • UK
t: +44 (0)1223 881711 • **e:** uksales@prior.com • www.prior-scientific.co.uk



FM 61500



Prior Scientific Inc

80 Reservoir Park Drive • Rockland • MA. 02370 • U.S.A.
t: +1 781-878-8442 • **e:** info@prior.com • www.prior-us.com

Registered Address: Units 3/4 Fielding Industrial Estate • Wilbraham Road • Fulbourn • Cambridge • CB21 5ET • United Kingdom Registered in England 404087