

## Stack Assembly

### PEM Fuel Cell Assembly Press



*Automated Fuel Cell Assembly Press*

- Tilting cradle design allows for easy access to stack from all sides
- Customized compression plates for any stack design or active area
- Compressive force ranges from 10kN to 160kN
- Variable stroke length, up to 2000mm
- Load cell display reads out current force and set points
- Servo driven ball screw for automated compression of stack
- Controllable to force or displacement
- Safety system with E-Stop
- Plate / MEA alignment features (usually precision chrome shafting)
- Adjustable axial stack twist, up to  $\pm 30^\circ$
- Adjustable press tilt, from vertical to horizontal

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## Additional options include:

- Linear encoder to monitor exact height of stack
- Spring loaded containment bars for holding plates against alignment datums
- Stack lifting fingers (pneumatic cylinders lift stack out of lower alignment plate for easy unloading)
- Automated data collection
- Integrated leak test capability
- Strap forming and welding
- Hydraulic compression systems available (lower cost)
- Manual version available



Automated Fuel Cell Assembly Press



Small Stack Press with Leak Test



Manual Fuel Cell Assembly Press

The Greenlight PEM fuel cell stack compression fixture is designed for maximum productivity, repeatability and value. Each compression fixture is partially customized to meet the force, stroke and active area of a customer's fuel cell stack design. Fixtures include plate alignment features for ease of assembly and to ensure consistent (plate to plate) alignment. Adjustable tilting of cradle allows operator easily find the right angle and stack twist for corner crowding of plates. Cradle tilts to horizontal for stack removal with a crane or lifting device, or tilts to vertical to allow the stack to be slid out on to a cart.

The automated control system has multiple safety interlocks including dual handed activation. Quality control data can be directly downloaded from the press to your network data base. Fixtures can be easily integrated with leak testing, strap welding or tie rod fastening capability.

Please speak with us about your specific requirements.



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