

MASTER-LEE ENGINEERED PRODUCTS INC.

The Master-Lee Engineered Products Fuel Assembly Shoehorn ensures safe and quick positioning of fuel on the reactor core-plate during fuel reload

An irradiated fuel assembly, which may be bowed or twisted is gently guided down onto the fuel pins, minimizing the possibility of ripped grid straps or the need to "box in" an assembly to the appropriate position. Using the shoehorn can save you valuable time.

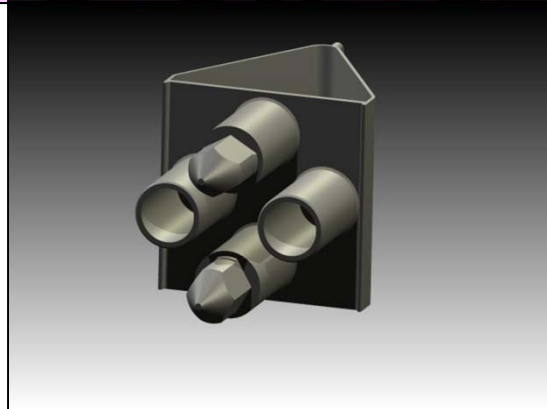
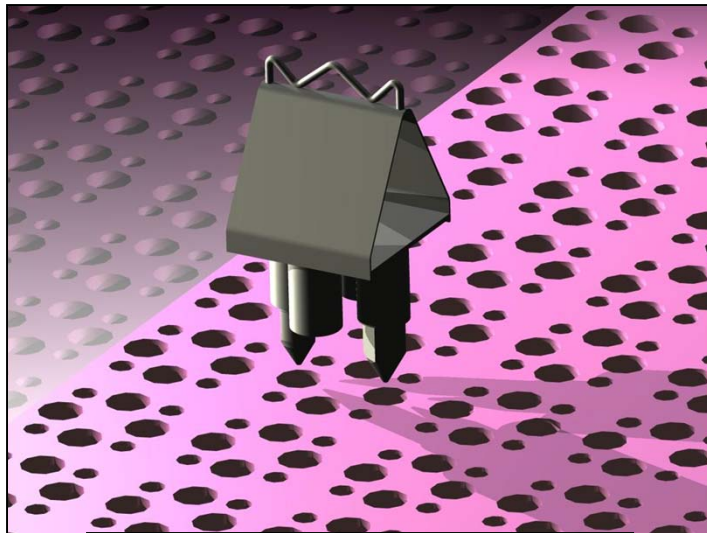
Made of stainless steel, the smooth angled sides of the shoehorn are machined for damage-free contact with the fuel assembly. The shoehorn's tapered locating pins easily seat within four core plate flow holes, allowing NO movement. When properly seated in the core plate flow holes, the shoehorn will only make contact with the bottom nozzle of the fuel assembly (and not the fuel rods).

Two nylon ropes attached to the self-centering lifting bail enables the operator to simply lift, move and seat the shoehorn. The submersed weight is approximately 30 pounds. To use the shoehorn, the operator simply lowers it to the adjacent location of where you want your fuel assembly to rest. The shoehorn will guide the bottom nozzle the final few inches onto its core plate guide pins.



Shoehorn Storage
Box - Part #
D0983

*The shoehorn
saves you critical time,
minimizes fuel assembly damage,
improves safety, and overall ...
saves you money!*



Single Sided Shoehorn - Part # W-17x17 &
15x15 D0773, W-14x14 D0042G01 & CE-
D0690

Approximate Specifications:

Size: 8.25" W x 7.75" L
Overall Height: 15"
Height Above Core Plate: 9" installed
Surface Weight: 50 lbs.
Submersed Weight: 30 lbs.
Surface Contact Incline: 45°
Material: Stainless Steel
Locating Pins: 4 each

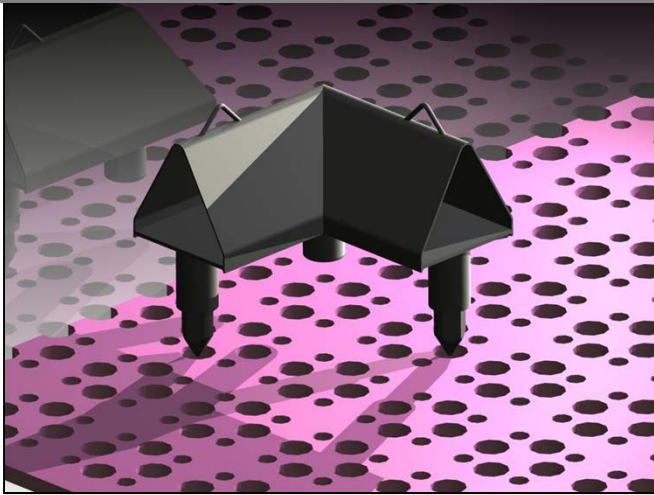
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MASTER-LEE ENGINEERED PRODUCTS INC.

The Master-Lee Engineered Products Fuel Assembly Combination Shoehorn incorporates all the benefits of the Double-sided and Single-sided shoehorns into one tool



Combination Shoehorn - Part # W-17x17 & 15x15 D0682 , W-14x14 D0665 & CE- D0687

By far the most popular and useful fuel handling tool, the Combination Shoehorn (fuel-assembly guide) combines the features of the single- and double-sided shoehorns and at nearly the same cost of the other shoehorns. The Combination Shoehorn offers maximum guidance when using the inside, two-sided portion of the tool - best for bow and twisted assemblies. But the back side of the tool offers you two single-sided guides for straight or bowed assemblies.

The Combination Shoehorn offers a unique design by having locating guide pins and a stop block that are designated with buoyancy active chambers to assist movement in water. The structure also has been designed with a lighter material to provide safe mobility when use in and out of water. To prevent the possibility of the locating pins to become lodged when removing and or inserting in the flow holes, we designed the flats on the pins to relieve the easy entry diameter to the positive seated diameter. By doing this, it also prevents the pins to become lodged in any deformed or missed location flow holes by means of tolerance issues that have been taken into consideration.

Shoehorns are in use at nearly every PWR type nuclear power station in the United States and many in Europe. There are other forms of fuel guides, but the Combination Shoehorn affords you the most cost-effective, convenient, timesaving and safe method for moving fuel.

Shoehorn Storage
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