

# NUHOMS® Lifting Yokes

Transnuclear's standard lifting yoke assembly provides the interface between the plant crane and the transfer cask and is used to maneuver the cask within the fuel building. A lifting pin connects the crane hook to the lifting yoke.

The lifting yoke is a passive, open-hook design with two parallel lifting beams fabricated from thick, high-strength steel plate material with a coating that is easy to decontaminate. It is designed to be compatible with the fuel/reactor building crane hook. The lifting yoke engages the outer shoulder of the transfer cask lifting trunnions. To facilitate ease of shipment and maintenance, all yoke subcomponent structural connections are bolted.

The yoke is designed and fabricated as a non-redundant single failure-proof special lifting device for critical loads, per NUREG-0612, in accordance with the rules of ASME BPVC Section III Subsection NF and ANSI N14.6.

Transnuclear also supplies a stand for safe placement during operations and which is integral to the storage container when the yoke is not in use.

## Lightweight Lift Assembly

A lightweight lift assembly is also available and can be used to maintain the weight of the loaded OS197 cask below 100 tons during the heaviest lift from the refueling floor down to the truck bay. The lightweight lift assembly is made from aluminum and uses nylon slings which are adjustable to accommodate different payloads.

## Features and Benefits

- Provides effective interface between the plant crane and the transfer cask
- Passive, open-hook design
- Yoke's subcomponent structural connections are bolted together
- Designed and fabricated as a non-redundant single failure-proof special lifting device for critical loads



## More About Transnuclear, Inc.

For over 40 years, Transnuclear has provided the nuclear industry with premier dry storage and transportation products and services.

In the U.S. today, more used fuel is stored in Transnuclear systems than all other systems combined. By the middle of 2011, more than 700 casks housed over 25,000 assemblies at 31 sites. Customers include utilities, reactor operators and the U.S. government.

In the transportation arena, AREVA operates the largest fleet of transportation casks in the world. AREVA organizes more than 3,000 multi-model shipments of nuclear material each year; more than 70 shipments are in progress at any given time.

Transnuclear's products are marked by the highest standard of safety, uncompromising commitment to quality, and operational dependability. The company is a wholly-owned subsidiary of AREVA Inc., a member of the AREVA Group, the leading worldwide nuclear energy products and services supplier.

## Technical Features

### Materials of Construction:

High Strength Carbon Steel Plate  
High Strength Bolts  
Lifting Beam – ASTM A517  
Lifting Hook – ASTM A517  
Pin – ASTM A564 Gr. 630 PH  
Coating Keeler & Long Self Priming Enamel No. 4500 (overall coating)  
Keeler & Long Enamel No. 4500 Compatible Epoxy Paint for Lettering.

### Physical Data:

Length of Lifting Beam – 110.3 inches  
Depth of Lifting Beam – 30 inches (typical)  
Clearance Envelope for Crane  
Hook – 10.75 inches x 42 inches  
Pin – 7 inches  
Hook Length – 81.5 inches (typical)  
Weight – 6,500 lbs. (typical)

### Design Parameters:

NUREG-0612  
ANSI N14.6  
ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsection NF and Appendices, 1983 Edition with addenda through Winter 1985 (for testing load allowable stress)  
Bolted Connections  
No Structural Welds  
Important to Safety Classification per 10CFR50 and 10CFR72  
Test Load is 300% of the Design Load

### Lightweight Yoke Specifications:

Length of Lifting Beam – 106 inches  
Depth of Lifting Beam – 15.5 inches  
Pin – None  
Weight – 2,300 lbs

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