



Orano TN

NUHOMS® HSM-H/HS

The NUHOMS® HSM H/HS is designed to keep the canister in a horizontal position, ensuring a safe and more stable project from beginning to end.



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Canisters are loaded horizontally for maximum stability.

HSM-H

The HSM-H is an upgraded version of the standard HSM, currently deployed at a number of independent spent fuel storage installation (ISFSI) sites around the country. The upgraded design offers enhanced shielding performance, increased heat rejection capabilities and enhanced ruggedness for resisting acts of sabotage.

HSM-HS

The HSM-HS is a high seismic version of the HSM-H, designed for sites with 1.0 g horizontal and 1.0 g vertical seismic accelerations.

BENEFITS

No critical lifts at the ISFSI

Offsite manufacturing eliminates major construction at the ISFSI site

Enhanced shielding performance

Superior seismic capabilities

Increased heat rejection capabilities

Enhanced ruggedness for resisting acts of sabotage

For offsite manufacturing, each module is constructed in two pieces, which are delivered separately and installed at the ISFSI. Manufacturing is done at our facility in North Carolina. This minimizes the impact on customer sites. If desired, Orano can manufacture these components onsite, thereby eliminating transportation costs.

Each HSM includes internal heat shields, shield door, and Dry Shielded Canister (DSC) support structure. The HSMs are arranged in an array on the ISFSI pad, which consists of a reinforced concrete base mat on compacted engineered fill. The ends of the array include shield walls to keep dose rates as low as reasonably achievable (ALARA). An optional feature of the HSM is the addition of the dose reduction hardware to the inlet and outlet vents to further reduce the dose rates.

The unique design of the HSM allows the canister to be transferred and stored without performing a single critical lift at the ISFSI during initial loading and later when unloading to ship offsite to a DOE repository.

Technical Features

Payload: Stores 24PTH, 61BTH, 32PTH, 32PTH1, 32PTH Type 1, 37PTH, 69BTH

Materials of Construction

- Reinforced concrete
- Carbon steel
- Corrosion resistant coatings
- Stainless steel wire mesh screens

Physical Data

- Width: 116"
- Length: 248"
- Height: 222"
- Adjacent modules are in contact with each other

Maximum canister length: 198.5"

Weight, empty: 308,000 lbs

Weight, loaded (32PTH): 418,000 lbs

Design Parameters

Maximum heat load: 40.8 kW

Maximum ambient temperature: 117°F

Minimum ambient temperature: -40°F

Horizontal seismic accelerations at site

- HSM-H: 0.37 g
- HSM-HS: 1.0 g

Vertical seismic accelerations at site

- HSM-H: 0.25 g
- HSM-HS: 1.0 g

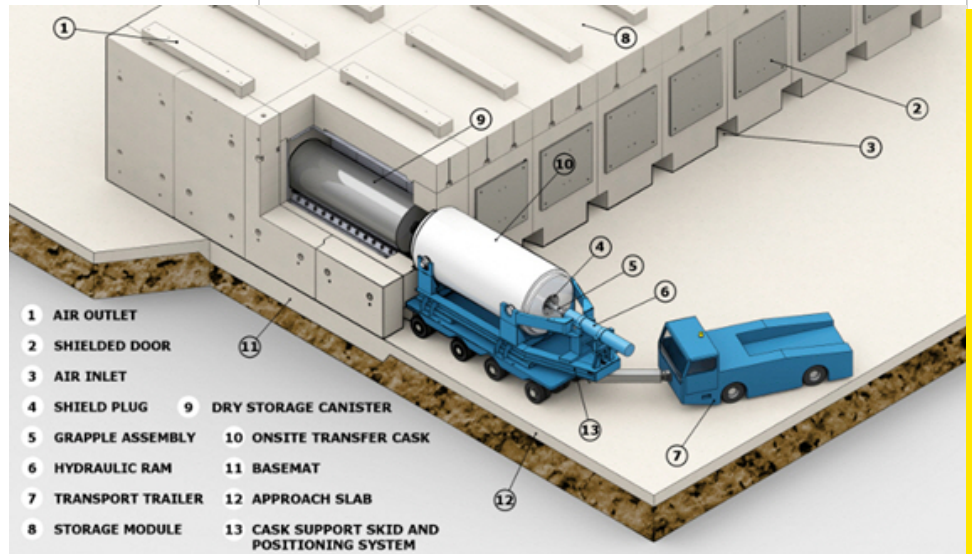
Maximum Flood: 50 feet at 15 fps

Tornado Wind: 360 mph

Licensed under NRC Certificate of Compliance 1004 and 1030



Scan the QR code, or click here to learn more about Orano's Fuel Storage options, including a video of the inspection process



Cutaway of canister in the HSM after leaving the transfer cask.

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