



Orano TN

NUHOMS[®] HSM-H/HS

Orano TN's NUHOMS horizontal storage module (HSM) system offers many important features. The one that sets it apart from any other dry storage system offered in the industry is the design of the concrete overpack and the method of transferring the canister into and out of the overpack.

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

Each module is constructed in two pieces, which are delivered separately and installed at the ISFSI. Orano TN fabricates these



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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.

components offsite to minimize the impact on customer sites, and delivers finished segments that do not require major construction or concrete placements at the ISFSI. Orano TN also offers an option for assembling the units onsite site, therefore eliminating transportation costs.

Each HSM is provided with internal heat shields, shield door and 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 provide shielding 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

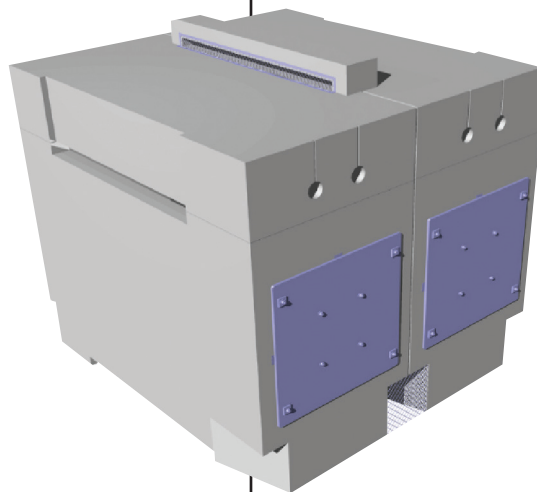
- Reinforced concrete
- Carbon steel
- Corrosion resistant coatings
- Stainless steel wire mesh screens

Physical Data

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

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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: 0°F

Horizontal seismic accelerations at site

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

Vertical seismic accelerations at site

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

Maximum Flood: 50 feet at 15 fps

Tornado Wind: 360 mph

Missile impact

Available under the 1004 and 1030 licenses

BENEFITS

No critical lifts at the ISFSI

Enhanced shielding performance

Superior seismic capabilities

Increased heat rejection capabilities

Enhanced ruggedness for resisting acts of sabotage

Components are fabricated off-site

Does not require any major construction at the ISFSI site