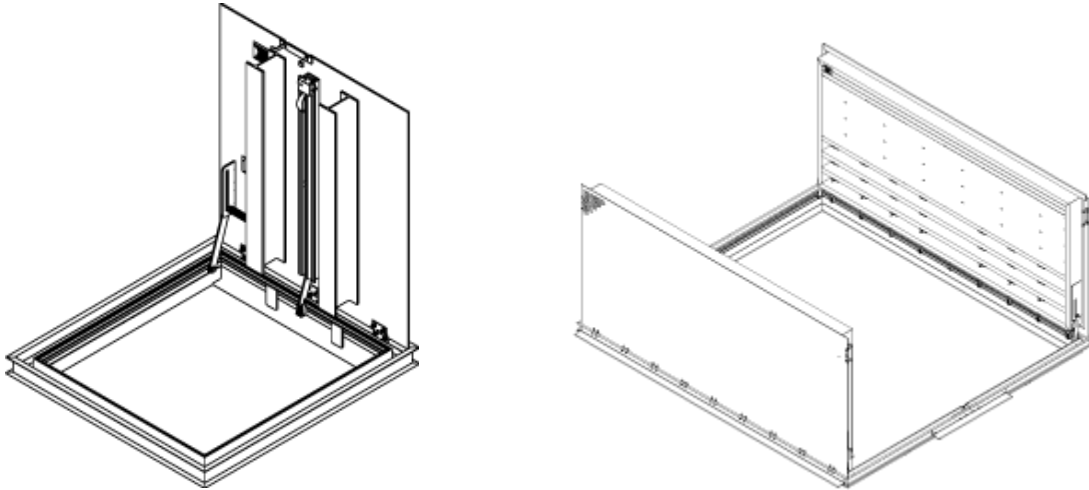


DRAINABLE FLOOR DOOR, H20, HS20

DRAINABLE LARGE EQUIPMENT HATCH, H20, HS20

Model(s): FDDH, FDDS, FDOH, FDOS



GENERAL DESCRIPTION

Floor door products are designed and built for years of service and weather tight access for personnel and equipment. The following are general instructions for installing, operating and maintaining floor door products. These are recommended general guidelines only. Locally accepted installation, sealing practices and procedures should be followed to ensure the ultimate weather-ability of floor doors installed into various types of flooring systems.

Product description

The H20 Drainable Floor Door and is designed for infrequent, off street traffic in exterior or high moisture areas when liquid flow into the door is a concern.

GENERAL SAFETY PRECAUTIONS Improper selection, installation, or use can cause personal injury or property damage. It is solely the responsibility of the user, through its own analysis to select products suitable for their specific application requirements, ensure they are properly maintained, and limit their use to its intended purpose. Follow proper local, state and federal regulations for proper installation and operation requirements.

Introduction + Safety

Please read the complete instructions carefully before beginning any work. To ensure proper installation and performance of the product, the following actions must be completed by the installing contractor. Failure to do so will affect product warranty.

Transportation + Storage

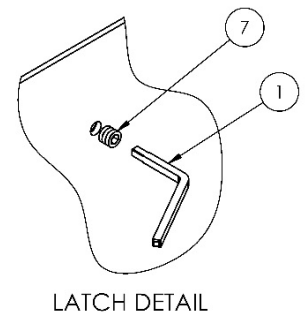
- Inspect all shipments and materials for missing or damaged components and hardware.
- Material must be stored in a clean, dry location.

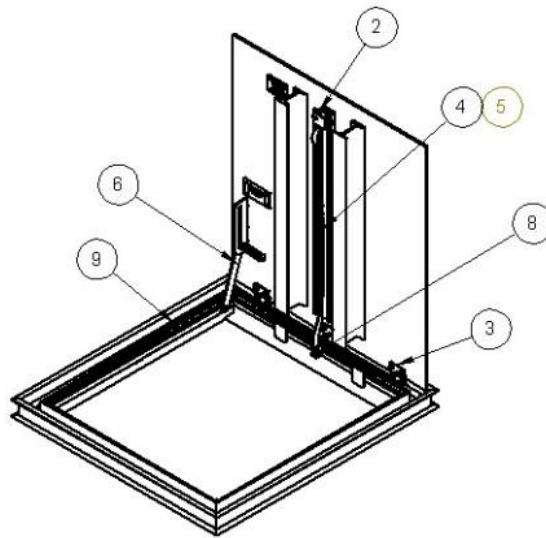
Preparation

- Locate the packing slip(s) and/or shop drawings.
- Verify that all products listed on the packing slip are included in the package.
- Check the products for damage. If products are damaged, report a freight claim immediately and leave the products in their packaging. If you sign for products without reporting damage you waive your right to a freight claim and will be responsible for their replacement cost.
- Read the instructions thoroughly before beginning installation.

Parts List

#	Part Number	Description
1	FD-KIT-KEY18	Latch Key
2	FD-KIT-SLAMLATCH	Slam Latch
3	FD-KIT-HINGE	Hinge
4	FD-KIT-SPRING40-H20-O	Spring and Spring Link
5	FD-KIT-SPRING80-H20-O	Spring and Spring Link
6	FD-KIT-HOA	Hold Open Arm
7	FD-KIT-PLUG	Latch Plug
8	FD-KIT-SPFRAMEMOUNT18-D	Frame Mount Spring
9	FD-KIT-GASKET18	Gasket
	FD-KIT-LIFTHANDLE	Lift Handle





Pre-Installation

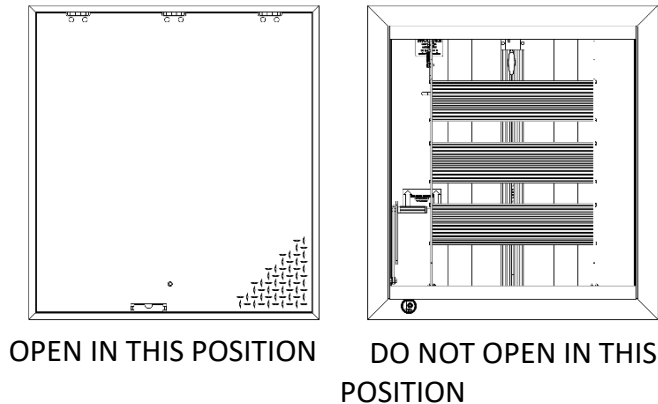
Storage

- Floor doors are shipped with the intent for installation within 30 days.
- If storage is required, ensure the floor doors are stored flat, covered and indoors.
- If stored outside, the floor door frames can expand and contract causing the protective coating to crack and chip.
- If the units are stored outside and the result is cracked primer, a primer coat must be reapplied before the unit is cast-in concrete. *Scrape and clean the affected surface and apply Rust-Oleum prior to installation.*

Set Up/Unpack

Warning: Floor Door covers are spring loaded. Ensure proper orientation prior to releasing slam latch. Do not release latch in upside down position.

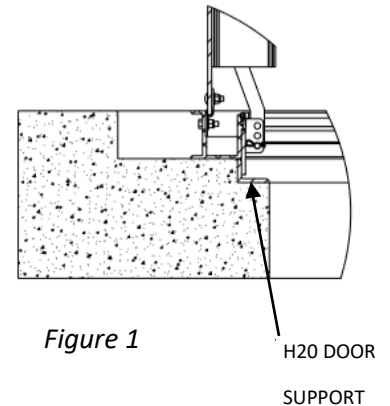
- Orient the floor door in an upright position as shown. This is the correct position to handle the floor door.
- Visually inspect slam latch from the underside to ensure latch bolt is engaged over frame. Cut plastic tie wrap and remove envelope.



INSTALLATION

Cast-In Place Installation

Note: All H20 off-street, infrequent vehicular traffic load rated floor doors must be installed with sufficient angle shelf support. Each door is manufactured with a support shelf as shown in Figure 1. It is the responsibility of the site structural engineer to determine medium type and depth of support needed for H20 loading.



1. Set the frame in the opening
 - a. Secure the floor door into the desired area with welding, bolting or other anchorage, making sure not to interfere with the operation of the hatch.
2. Square the frame
 - a. It is vital that the frame remains square during the concrete pour.
3. Protect exposed aluminum from cement
 - a. To ensure a good quality installation and prevent staining, alkaline building materials such as cement should be removed quickly from aluminum surfaces.
4. Pour cement
 - a. Pour cement to the top edge of the frame, leveling to finish flush with the top flange of the floor door. Allow to cure for seven days prior to opening the floor door. Opening the unit prior may crack the concrete.

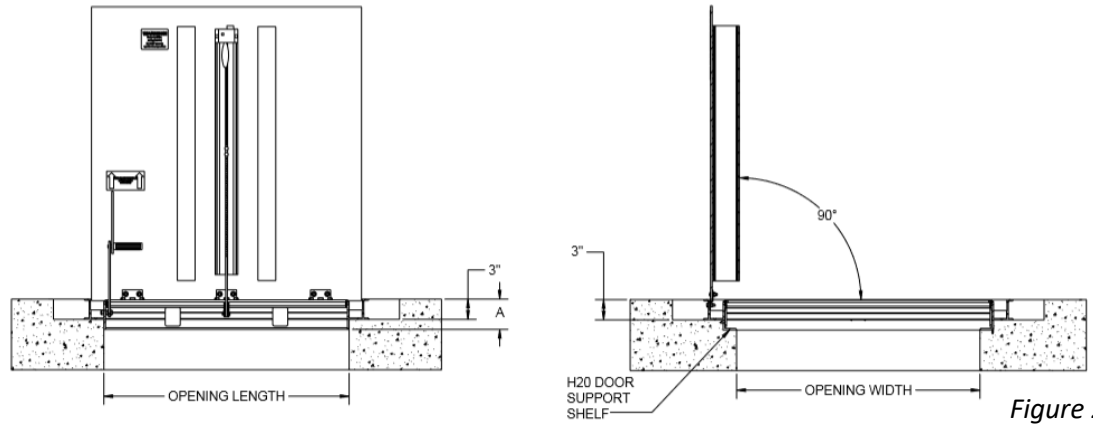


Figure 2

- b. After the seven days allowed for concrete curing, open the door(s) and inspect the unit for excess concrete that may have seeped or fallen into the hinges, or latch. *(The doors will be heavy until the springs are engaged; opening will require two people.)* It is important to note that springs will be disengaged on doors with more than one spring. Remove any concrete to ensure smooth operation.

5. Engage Springs

Note: Doors with two or more springs per door will be shipped with the springs loose within the housing. These springs must be secured in place before operating the door.

- a. Manually open the door to the 90-degree position. The hold open arm (HOA), will automatically hold the door open.
- b. While in the 90-degree position the spring should settle on the plate at the bottom of the housing.
- c. Slide the top spring plate (*Illustration A*) down until it touches the top of the spring. Using a ½-inch wrench tighten the two hex head screws.
- d. Disengage the hold open arm to test the closing and opening operation. The door should slowly begin to close requiring assistance to fully shut.

6. Adjust Spring (optional)

Note: Spring position is factory set. Adjust only if field conditions require more or less spring force.

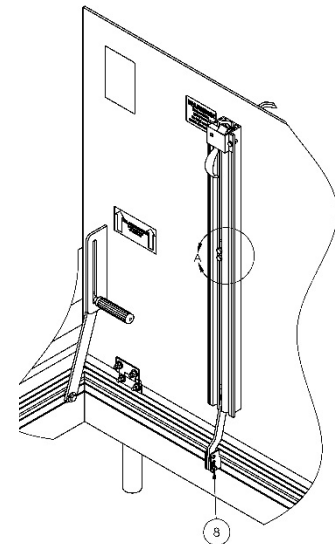


Figure 3

- a. Open the door to the 90-degree position, the HOA will

- automatically hold the door open.
- b. The spring link bracket (*Illustration B*) allows spring tension adjustment by changing the position of the cotter pin link connection.
 - c. The lowest position provides the most spring force.
 - d. First, disengage the spring by loosening the two hex head screws at the top of the spring (*Illustration A*).
 - e. Remove the cotter pin and move the spring link into the desired position. Replace the cotter pin and re-tighten the hex head screws.
 - f. Disengage the hold open arm to test the closing and opening operation. The door should slowly begin to close requiring assistance to fully shut.

Hex Head Screws

Top Spring Plate

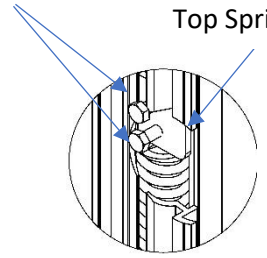


Illustration A

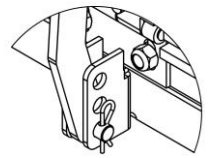


Illustration B

OPERATION

Floor doors are designed and built for years of dependable access. All floor doors come standard with stainless steel hardware components. The basic components for door operation include turn handle latches, compression springs, stainless steel hinges and a locking hold open arm as detailed:

- Latch: 316 stainless steel slam latch with interior rotating handle, and exterior L- handle key
- Spring: Compression springs to ensure ease of opening and closing during use.
- Hinge: Stainless Steel hinges
- Hold Open Arm: Locking hold open arm automatically engages and locks when the door fully opens. The hold open arm must be engaged in the locked position to ensure that the door does not close unintentionally. Pull the red vinyl grip handle to unlock and safely close the door.

Opening Fully Installed Door

To open the floor door cover, use the slam latch L-handle key and rotate the slam latch. The cover will un-latch and the spring will begin to lift the door. Use the lift handles to fully pull open the door. The hold open arm engages and locks the cover in the 90- degree open position

Closing Fully Installed Door

To close the floor door cover, push down. Slam the door slightly to ensure proper latch engagement.

MAINTENANCE

- Floor doors should be manually operated at minimum twice per year to check performance.
- Lubricate moving parts such as hinges, and latches with a food grade grease or silicone spray lube as required to maintain a smooth opening and closing of the door. Do not over grease. Do not use regular lubricating oil as it can attract dust and grit.
- Non-moving parts should be cleaned with a mild soap or dishwashing detergent and water solution.
- Gaskets should be cleaned with a clean, damp, lint-free cloth. Do not apply mineral oils, vinyl dressings, or other lubricants to the gasket as they may cause the gasket to break down over time.
- If floor doors are installed in corrosive environments such as environments exposed to saltwater or hydrogen chloride, the stainless-steel hardware must be coated with a custom finish and the springs should be lubricated on a strict three to six-month schedule.

QUESTIONS?

For more information on installation, repair or replacement, please visit nystrom.com