VIKING®

TECHNICAL DATA

IBC SPILL CONTAINMENT UNIT

The Viking Corporation | 210 N Industrial Park Drive | Hastings MI 49058
Viking Special Hazards | Technical Services: 877-384-5464 | Email: techsvcs@vikingcorp.com | www.vikinggroupinc.com
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1. GENERAL DESCRIPTION

The composite Intermediate Bulk Container (IBC) Spill Containment Unit is used to store single ignitable liquid composite IBC's when located within manufacturing, process areas, small storage or similar environments.

The unit is particularly useful when a limited number of IBC's are introduced to an area where a fixed fire protection system is not in place or not able to effectively cover the additional risks involved with Class B fires. Subject to AHJ acceptance, the unit also gives the option to utilize non-listed/approved IBC containers.

The fire protection containment unit is intended to capture an ignitable liquid release within a footprint designed to limit the size of a potential pool fire. The Model 275 and Model 330 containment units have a capacity of up to 150% of their model volume as shown in Table 3.4.1. Containing the majority of released ignitable liquid prevents the formation of a spreading fire. Limiting the size of the pool surface within the unit reduces the heat release rate of the fire thereby mitigating damage within an occupancy. There is also the capacity to accommodate additional water or foam solution discharged by a sprinkler or deluge system in the protected area.

Typical fields of application include chemical industries, pharmaceutical plants, automotive plants, paint manufacturing, wood processing and warehousing operations.

This Technical Data is intended for trained experts.

For further information, please contact the appropriate sales office in **Section 4 - Availability**, or refer to the technical documentation.

The contents of this publication are subject to modifications without notice.

WARNING: Cancer and Reproductive Harm- www.P65Warnings.ca.gov

2. LISTINGS AND APPROVALS

FM APPROVED FM Approved – Storage Containers for IBCs; Class 6086

NOTE: International approval certificates may be available upon request.

Other Approvals are in the name of the original equipment manufacturer. Contact Viking for further information.

3. TECHNICAL DATA

3.1 Construction Features

- Containment sump
- Additional capacity to contain discharge from fire suppression system
- Carbon steel construction
- Flame barrier to protect containment sump from fire
- No overflow or spread of ignitable burning liquid
- Forklift or pallet truck access
- Filling and dispensing access
- Open top to accept overhead sprinkler discharge
- Hinged front guard for easy loading / unloading operations
- Optional roller tracks for easy placement of the composite IBC

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3.2 Components and Dimensions

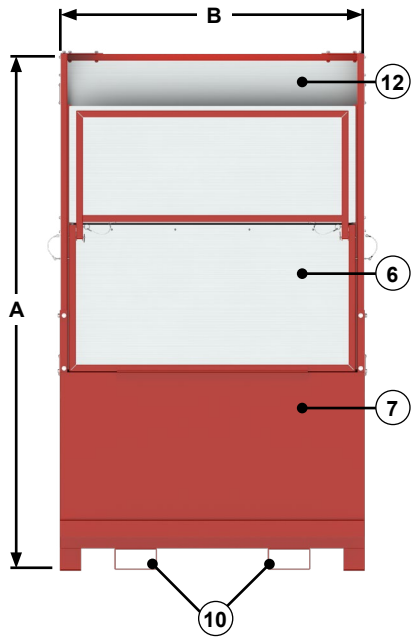

Figure 3.2.1 - Front View

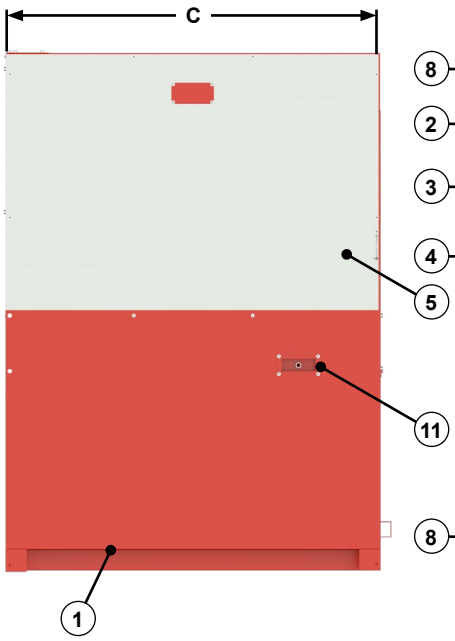

Figure 3.2.2 - Side View

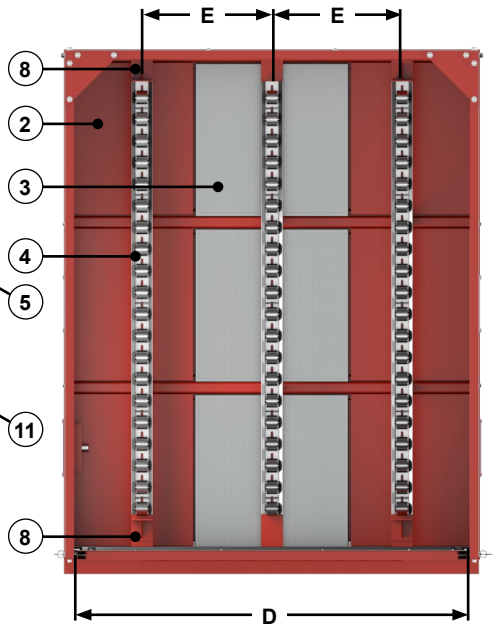

Figure 3.2.3 - Plan View

Table 3.2.1 – Main Components					
Item	**Description**	**Qty**	**Item**	**Description**	**Qty**
1	Base unit w/ containment sump	1	**7**	Data plate	1
2	Catchment basin cover plate	6	**8**	Front stoppers	2
3	Flame barrier	3	**9**	Rear stopper	2
4	Roller tracks	3	**10**	Fork/pallet truck pockets	2
5	Side panel	2	**11**	Connection portal	1
6	Front hinged splash guard	1	**12**	Rear panel	1

Table 3.2.2 – Dimensions				
Ref	**Model 275**		**Model 330**	
	Inches	**mm**	**Inches**	**mm**
A	92	2337	98	2490
B	57.8	1468	57.8	1468
C	70.5	1791	70.5	1791
D	54.75	1391	54.75	1391
E	18	457	18	457

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3.3 Materials

Table 3.3.1 - Standard Materials	
Containment sump	Carbon Steel
Catchment basin plate sections	Carbon Steel
Catchment basin flame barrier sections	Stainless Steel
Roller tracks	Galvanized Steel
Upper panels	Galvanized Steel
Splash guard	Galvanized Steel
Paint	Flame red RAL 3000

3.4 Ordering Information

Table 3.4.1 - Ordering Information*

Part Number	Description	Size		Volume of Base Unit (with sump)	
		Gallons	Liters	Gallons	Liters
24050	Model 275 IBC without rollers	275	1040	412.5	1562
24054	Model 275 IBC with rollers	275	1040	412.5	1562
24119	Model 275 IBC without rollers (preassembled)	275	1040	412.5	1562
24120	Model 275 IBC with rollers (preassembled)	275	1040	412.5	1562
23973	Model 330 IBC without rollers	330	1250	495	1874
24045	Model 330 IBC with rollers	330	1250	495	1874
24121	Model 330 IBC without rollers (preassembled)	330	1250	495	1874
24122	Model 330 IBC with rollers (preassembled)	330	1250	495	1874
Spare/Replacement Parts					
24147	Flame barrier filter	21¼" x 21¼" x 1⅜" (540 mm x 540 mm x 42 mm)			
23966	Catchment basin cover plate	18¾" x 21⁷⁄₆₄" x 2" (476 mm x 536 mm x 51 mm)			

* Units may be delivered fully assembled for an additional charge. Contact Viking for details.

4. AVAILABILITY

Please contact your local Viking sales office for further information. The product is available directly from Viking and official distributors only.

Americas: The Viking Corporation, 210 N. Industrial Park Drive, Hastings, Michigan 49058, Toll free phone: (800) 968-9501

EMEA: Viking S.A., 21, Z.I, Haneboesch, L-4562 Differdange / Niederkorn, Tel.: +352 58 37 37 - 1, Fax: +352 38 37 36, vikinglux@viking-emea.com

APAC: The Viking Corporation (Far East) Pte. Ltd., 69 Tuas View Square, Westlink Techpark, Singapore 637621

Tel: (+65) 6 278 4061, Fax: (+65) 6 278 4609, Email: vikingsingapore@vikingcorp.com

5. PERFORMANCE DATA

The fire protection containment unit is designed to meet the following criteria:

- Non-combustible construction
- Leak-tight sump that is capable of storing at least 150% of the contents of the largest IBC for which it is designed
- Solid walls on three (3) vertical sides of the unit
- Shall be stable and stationary. No wheels or other devices are permitted which would allow the unit to be physically moved by personnel while housing a composite IBC
- Limits the exposed surface area to an area no larger than 17 ft² (1.5 m²)

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6. ASSEMBLY AND INSTALLATION

6.1 Important Installation Information

This unit is intended for manufacturing, processing or storage areas that contain ignitable liquids stored in composite IBC's where traditional fixed fire protection systems may be unsuitable, inadequate or non-existent.

The unit is delivered from the factory partially assembled. Before initial use, the unit must be removed from the packing and assembled according to the instructions in this document. Refer to https://webtools.vikingcorp.com/ibccontainmentsetup/.

Upon delivery, remove the packaging material and locate the assembly hardware inside the pan. Do not discard this hardware. Continue below to assemble the unit.

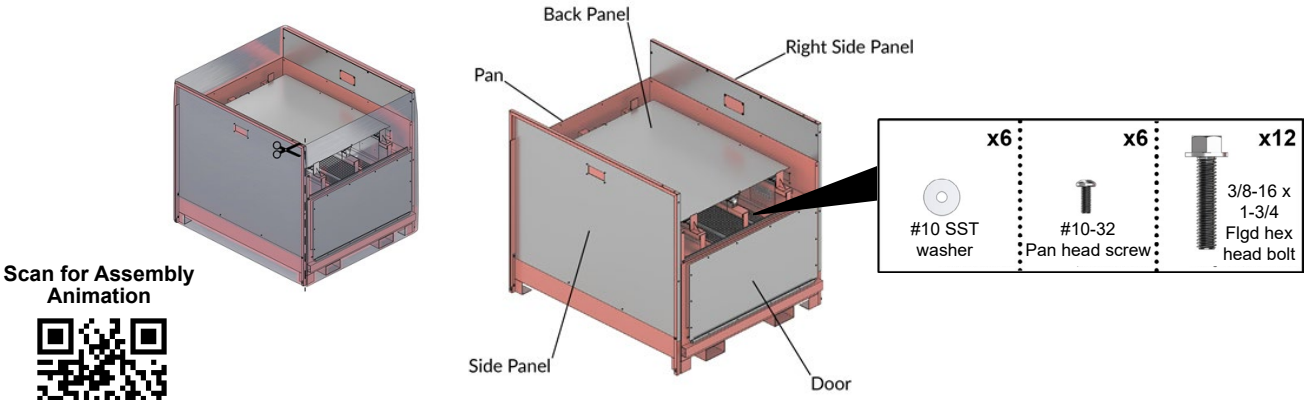

Figure 6.1 - Delivery

6.2 Assembly:

NOTICE

To avoid damaging the unit, assembly requires two (2) people.

1. Remove the straps securing the back panel.
2. Carefully lift the back panel up then out of the unit, then set it aside.

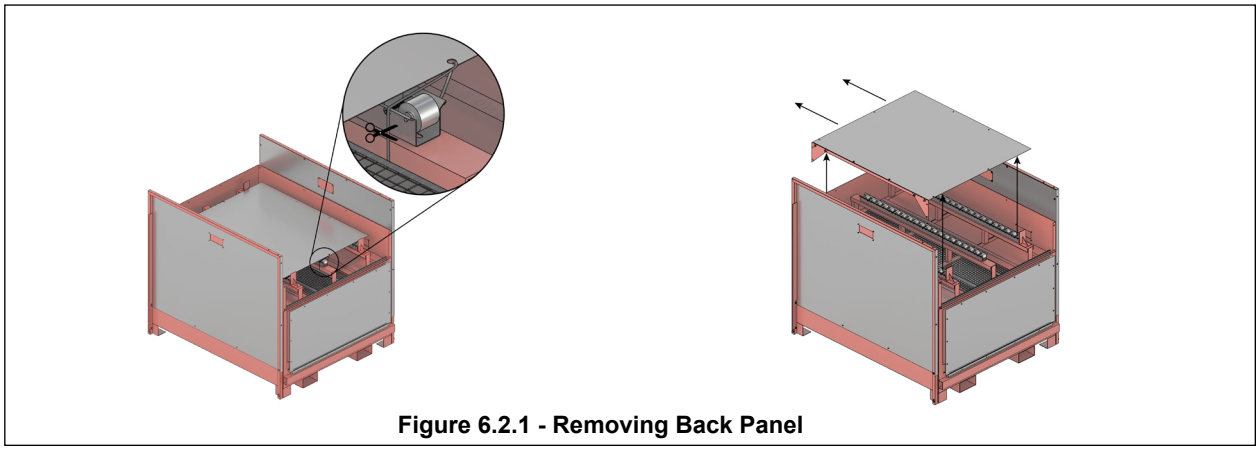

Figure 6.2.1 - Removing Back Panel

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3. While holding the side panel in place, remove the bolts (A). Retain the bolts for use later.
4. Rotate the panel 180° and slide downward into mounting position. Install and HAND-TIGHTEN the hardware (4 places).
5. Repeat steps 3-4 for the remaining side panel.

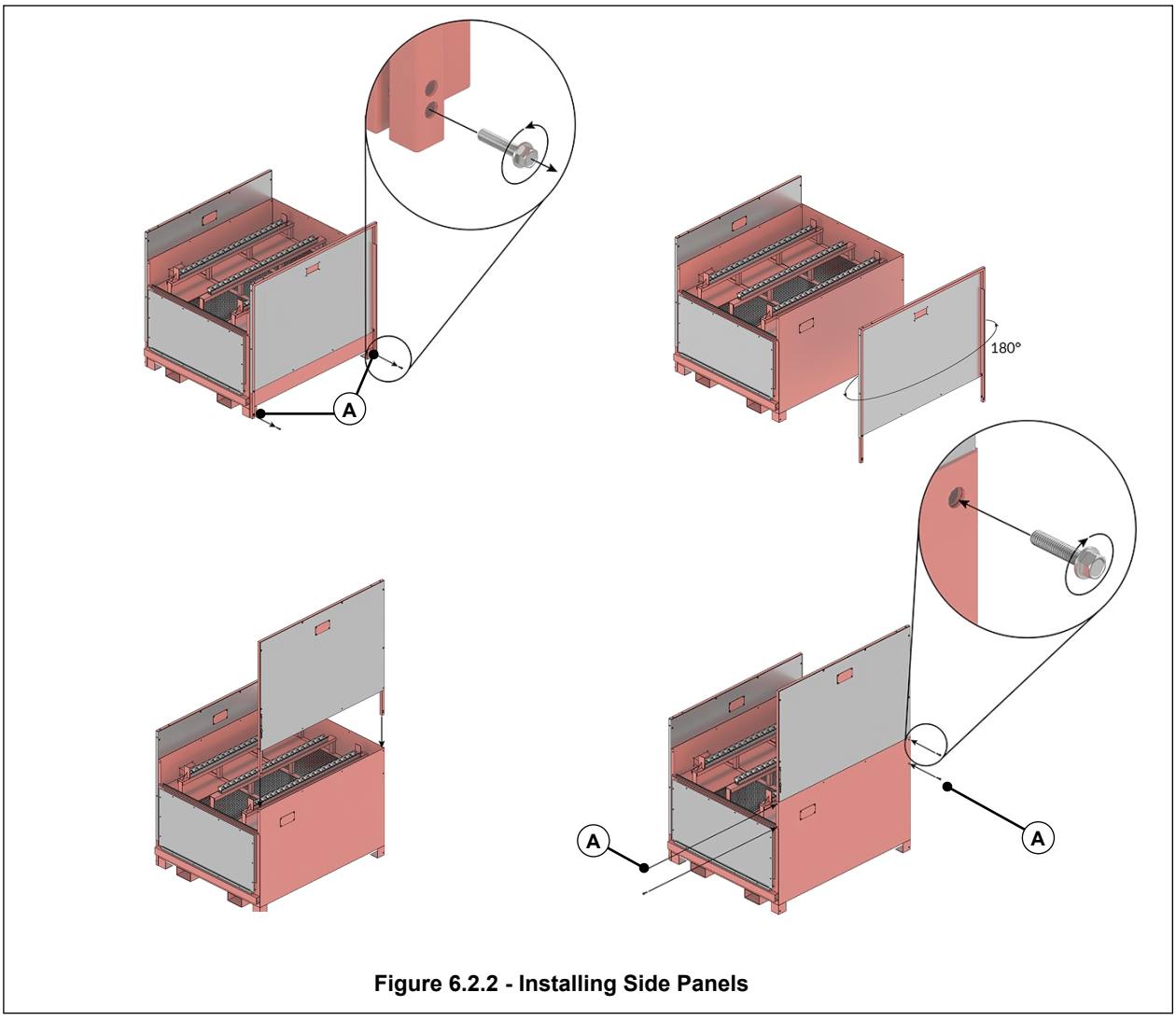

Figure 6.2.2 - Installing Side Panels

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6. Slide the rear panel into place between the installed side panels are on the outside. Install and HAND-TIGHTEN the bolts.
7. Install and HAND-TIGHTEN the screws with washers in each of the 6 bottom holes on the panels (2 on each).

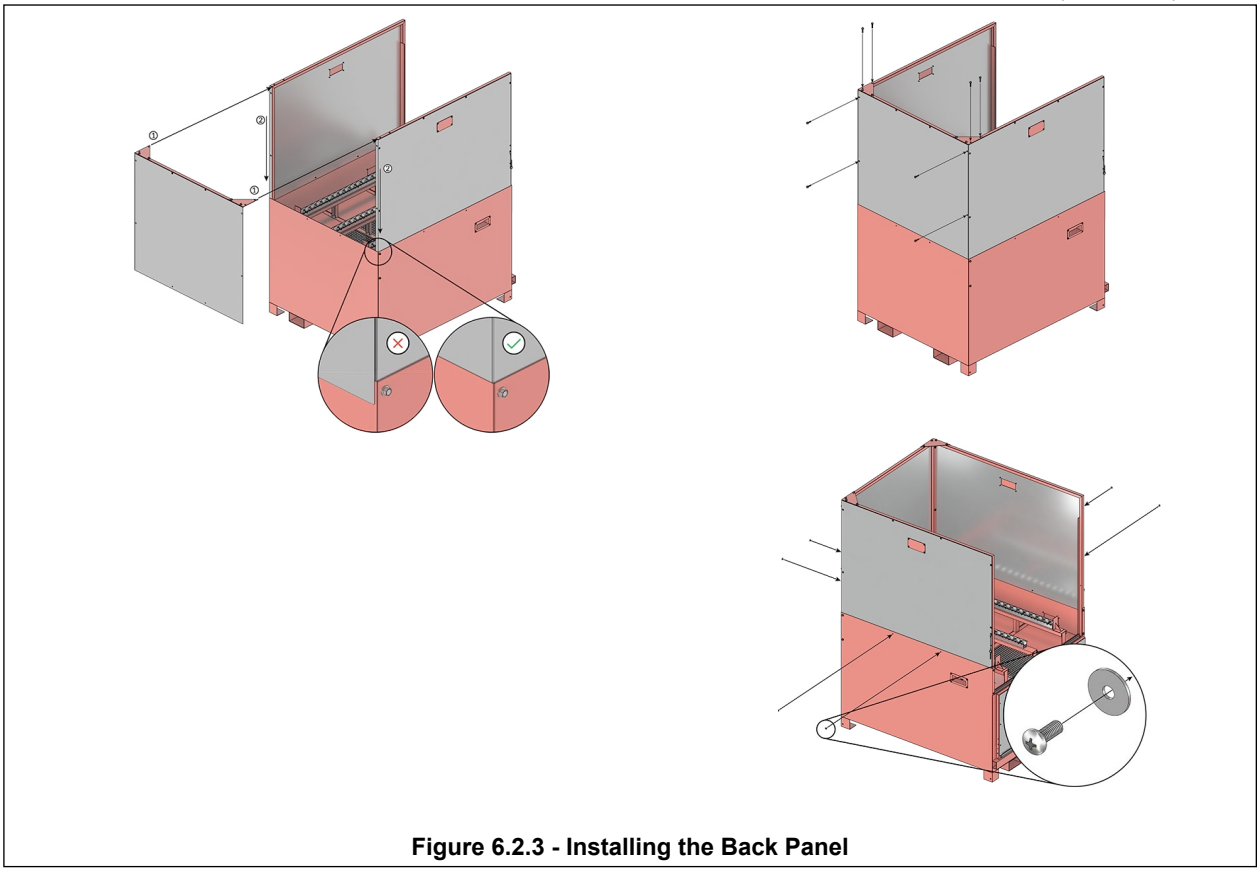

Figure 6.2.3 - Installing the Back Panel

8. Flip the lower segment of the splash guard door up and use the pins on each side to hold it in the upright position.

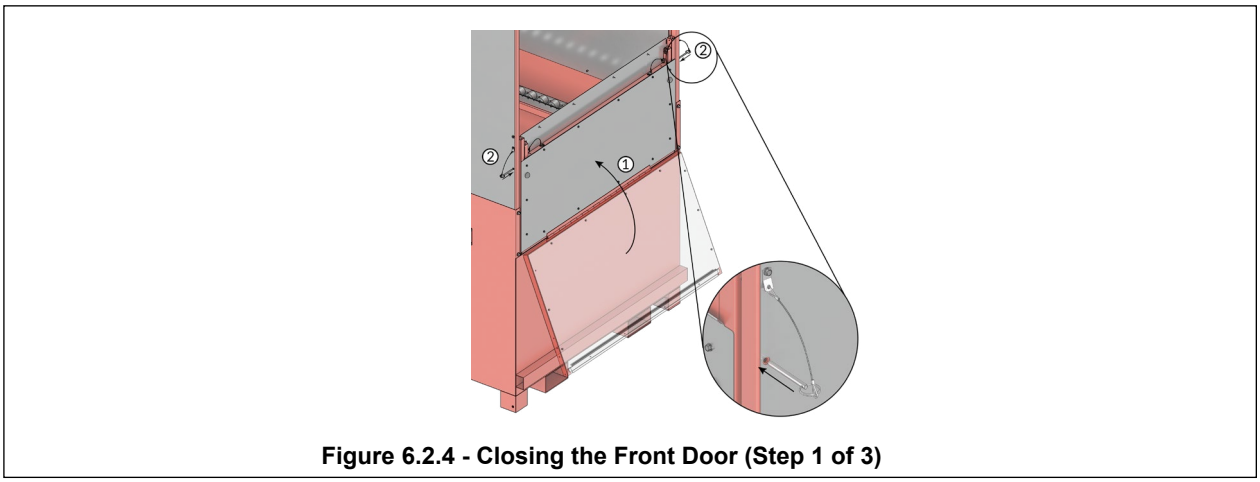

Figure 6.2.4 - Closing the Front Door (Step 1 of 3)

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9. Move the interior pins on the top half-door from the sides to the bottom of the top half-door to unlock it.
10. Flip the top half-door section up and hold it in position.

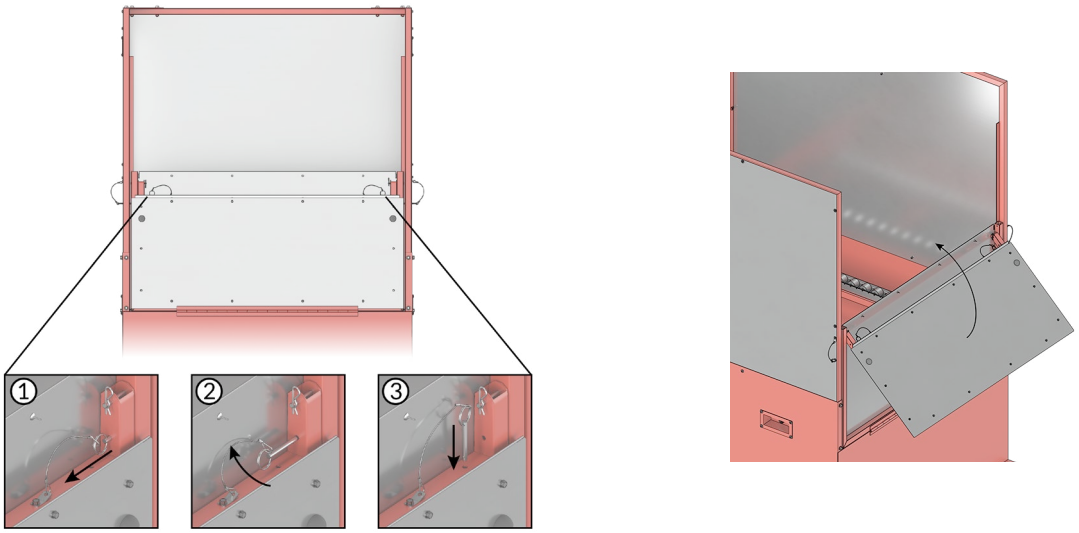

Figure 6.2.5- Closing the Front Splash Guard (Step 2 of 3)

11. Move the interior pins to the top half-door to lock it in place.

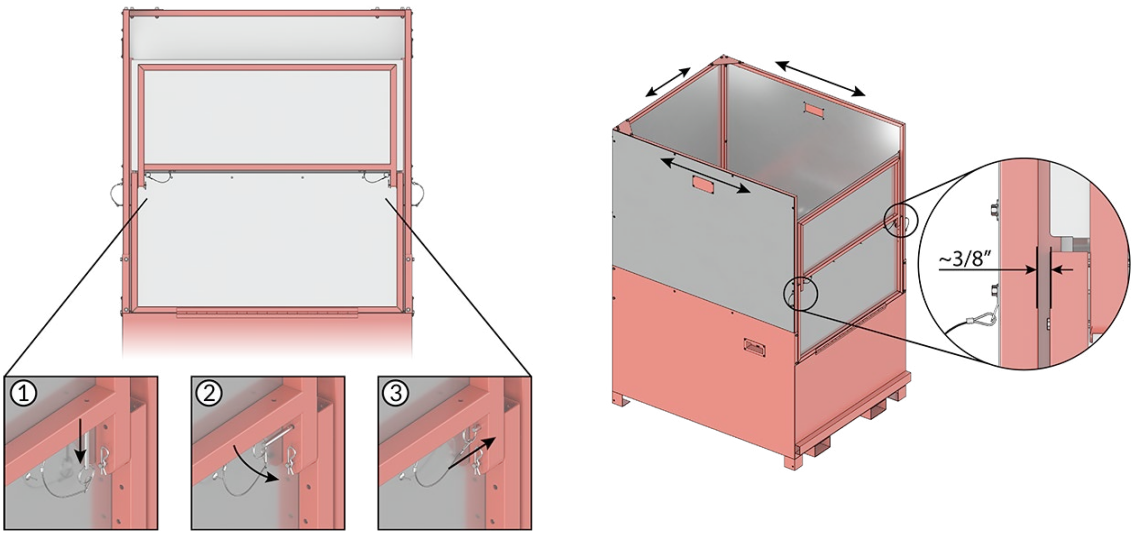

Figure 6.2.6 - Closing the Front Splash Guard (Step 3 of 3)

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12. Test the doors as necessary to ensure proper alignment. The pins should not bind. Adjust if necessary.
13. Tighten all hardware. Observe the torque specifications below.

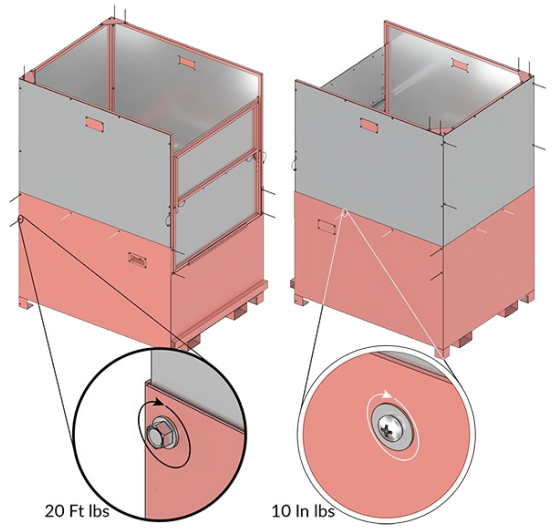

Figure 6.2.7 - Tightening Hardware

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7. OPERATION

7.1 Safety

⚠ WARNING **Crushing/Cutting Hazard**

Moving parts and sharp edges can crush and/or cut.
- **Keep hands clear of moving parts and wear personal protective equipment (gloves).**
- **Follow lock-out/tag-out procedure before servicing.**

⚠ CAUTION **Fire Hazard**

During fire conditions, small amounts of ignitable fluids could be ejected from the front of the unit.
- **DO NOT store flammable materials within 6.7 feet (2 meters) of the front.**

⚠ CAUTION **Fire Hazard**

If the unit is located in the area of an suppression system, take note that the containment sump can only take 150% of it's full capacity before it will start overflowing.

NOTICE

The composite IBC stored in this unit must always be positioned at the rear limit stop. To ensure the effectiveness of the fire protection function, it is essential that the unit's front hinged splash guard maintains a maximum distance from the front face of the composite IBC.

NOTICE

DO NOT MOVE the unit when loaded with a composite IBC. Locate the unit according to the instructions in this document before loading or unloading a composite IBC.

7.2 Function

- When a fire involving a composite IBC filled with a ignitable liquid occurs, the IBC melts and allows the liquid to escape.
- The ignitable or burning liquid flows through the flame barrier (a stainless steel mesh filter mat) into the containment sump. This flame barrier separates and shields most of the ignitable liquid from the fire at the IBC. The fire can then be extinguished by a sprinkler system, fire extinguisher or fire department intervention.
- If a sprinkler system is triggered by a fire within the unit, it holds not only the volume of ignitable liquid from a typical composite IBC, but also an additional 50% more for the suppression agent (water or foam solution). This volume is introduced into the unit via a sprinkler or deluge system during an approximate 20 minute discharge time (which is the fire rating time of a listed/approved composite IBC).

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7.3 Loading and Unloading

NOTICE

The fire protection containment unit can only be loaded with one composite IBC.

1. Using an appropriate lifting device, lift the IBC above and over the stops in the front of the containment unit.

NOTICE

Moving a composite IBC resting directly on the supports may damage the corrosion resistant paint. If your unit is not equipped with rollers, properly position the composite IBC before it comes in contact with the supports.

2. Verify the composite IBC is centered and carefully lower it onto the rollers/supports.
3. If equipped with rollers, the composite IBC may be carefully pushed/pulled into place after being lowered into the unit.
4. Close the front splash guard doors. Refer to **Section 6.1 - Assembly (Steps 10-12)**.
5. To unload, the front splash guard doors must be opened and all hoses disconnected. Pull the unit forward to the limit stops and, using an appropriate lifting device, lift the IBC up and then out of the unit.

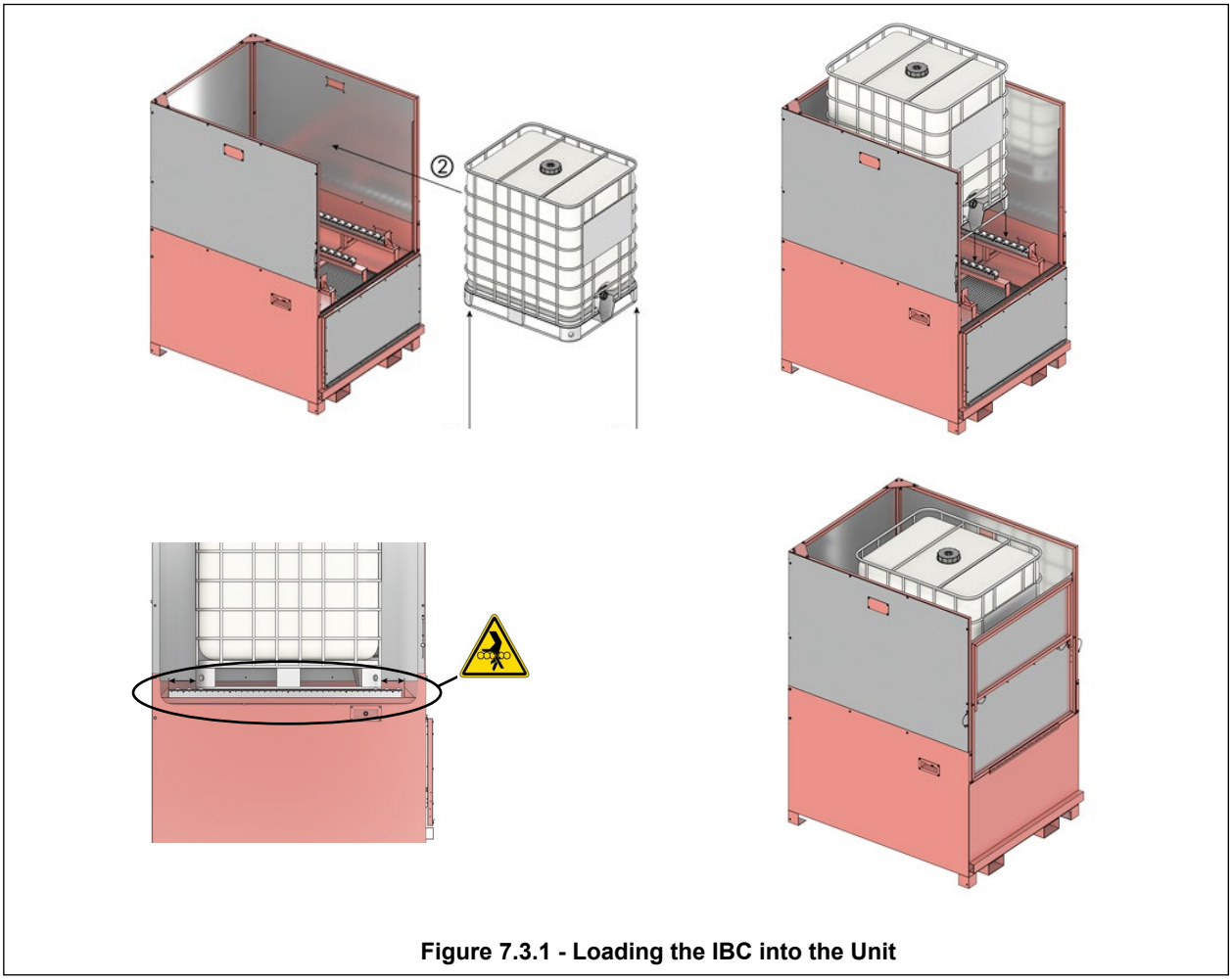

Figure 7.3.1 - Loading the IBC into the Unit

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7.4 Configuration (Drain or Fill)

The unit is shipped from the factory with the 1/2-14 NPT dispensing portal set up for draining. To change the configuration, continue below.

1. Remove the dispensing portal and gasket from the bottom port. Retain the gasket and hardware.
2. Remove the cover plate and gasket from the top port. Retain the gasket and hardware.
3. Reinstall both items in the appropriate ports depending on your needs. Observe the torque specifications below.
4. Connect hoses as necessary (not included).
5. Close the front splash guard doors. Refer to **Section 6.1 - Assembly (Steps 10-12).**

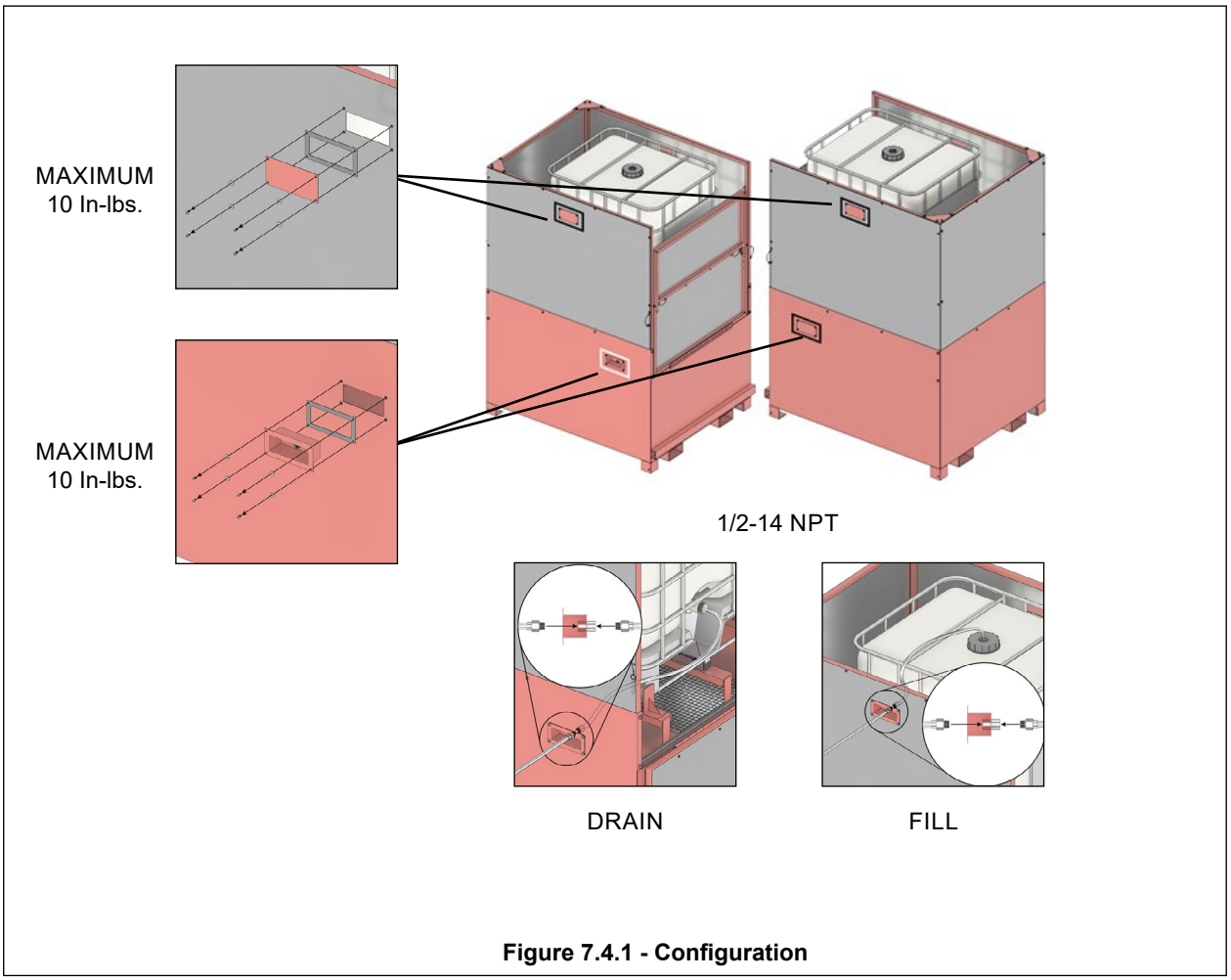

Figure 7.4.1 - Configuration

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7.5 Emptying the Pan

In the event of a spill, the pan can be emptied. To empty the pan, continue below.

1. Before emptying the pan, verify the composite IBC is empty.
2. Remove the composite IBC from the containment unit. Refer to Section 7.3 Loading and Unloading.
3. Carefully lift up and remove the screen. Slide the screen off to one side.
4. Place a hose in the pan of the IBC Spill Containment unit and use an appropriate pump to remove the fluid from the pan.

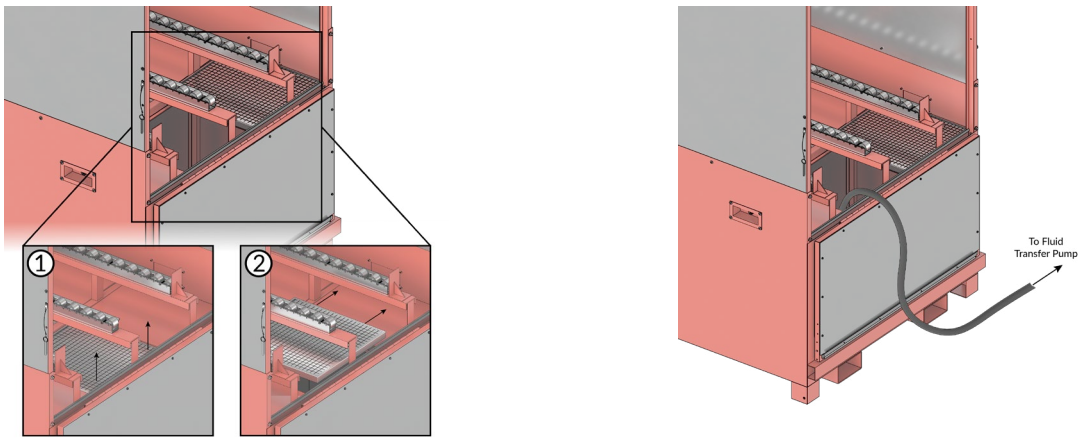

Figure 7.5.1 - Emptying the Pan

8. GUARANTEE

For details of warranty, refer to Viking's current list price schedule or contact Viking directly.

9. INSPECTION, TESTS AND MAINTENANCE

NOTICE

The facility owner is responsible for maintaining the fire protection containment unit in a proper operating condition.

The fire protection containment unit must be inspected during every IBC exchange if possible, but a minimum of once a month. To do so, a cover plate or flame barrier should be lifted to check whether liquid has collected in the containment unit sump. Visual presence of liquid could indicate a damaged IBC or a spillage during filling or emptying activities. If required, the liquid must be removed and disposed of in an environmentally-friendly manner.

The flame barrier must also be checked. The flame barrier's filter mats must not be damaged (permeable holes) or soiled with debris. Soiling slows down or prevents the speedy flow of liquids which need to flow into the containment sump for fire protection purposes. Clean any soiled flame barriers thoroughly with a high-pressure, noncombustible cleaner for example, or replace the filters completely.

A monthly visual check must also be made on the fire protection containment unit structure to ensure it is undamaged. Damage could occur during movement around the facility or due to general poor handling of other objects around the unit. Such damage could create a leak or reduce the effectiveness of the unit in a fire scenario. If relevant, replace damaged components with new components.

10. DISPOSAL

At end of use the product described here should be disposed of via the national recycling system.