



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.

2. LISTINGS AND APPROVALS



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



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

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3.2 Components and Materials of Construction

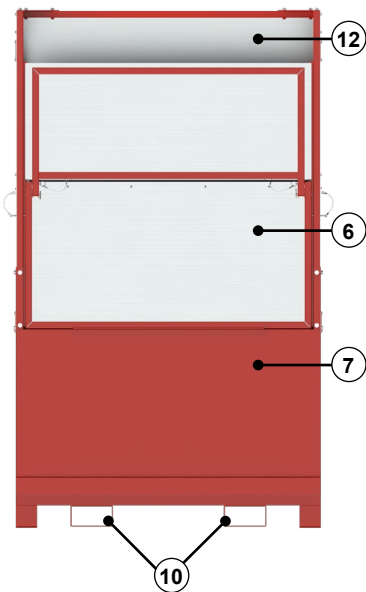


Figure 3.2.1 - Front View

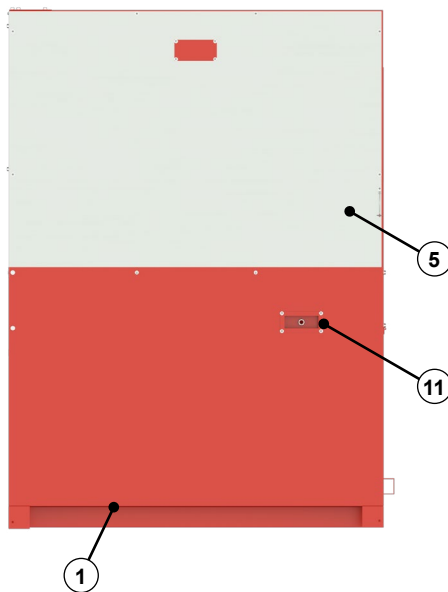


Figure 3.2.2 - Side View

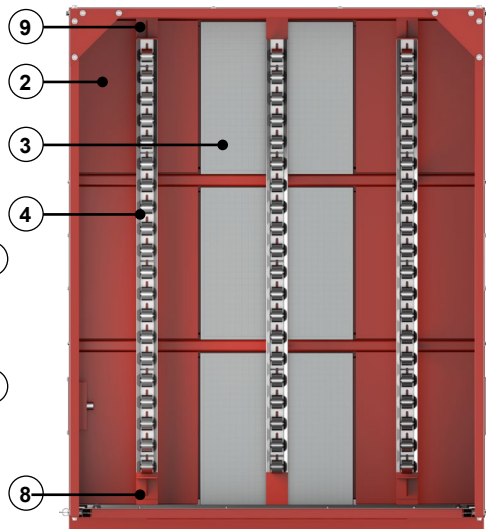


Figure 3.2.3 - Plan View

Table 3.2.1 – Components and Materials of Construction			
Item	Description	Qty	Standard Material
1	Base unit w/ containment sump	1	Carbon steel
2	Catchment basin cover plate	6	Carbon steel
3	Flame barrier	3	Stainless steel
4	Roller tracks	3	Galvanized steel
5	Side panel	2	Galvanized steel
6	Front hinged splash guard	1	Galvanized steel
7	Data plate	1	n/a
8	Front stoppers	2	Carbon steel
9	Rear stopper	2	Carbon steel
10	Fork/pallet truck pockets	2	Carbon steel
11	Connection portal	1	Varies
12	Rear panel	1	Galvanized steel



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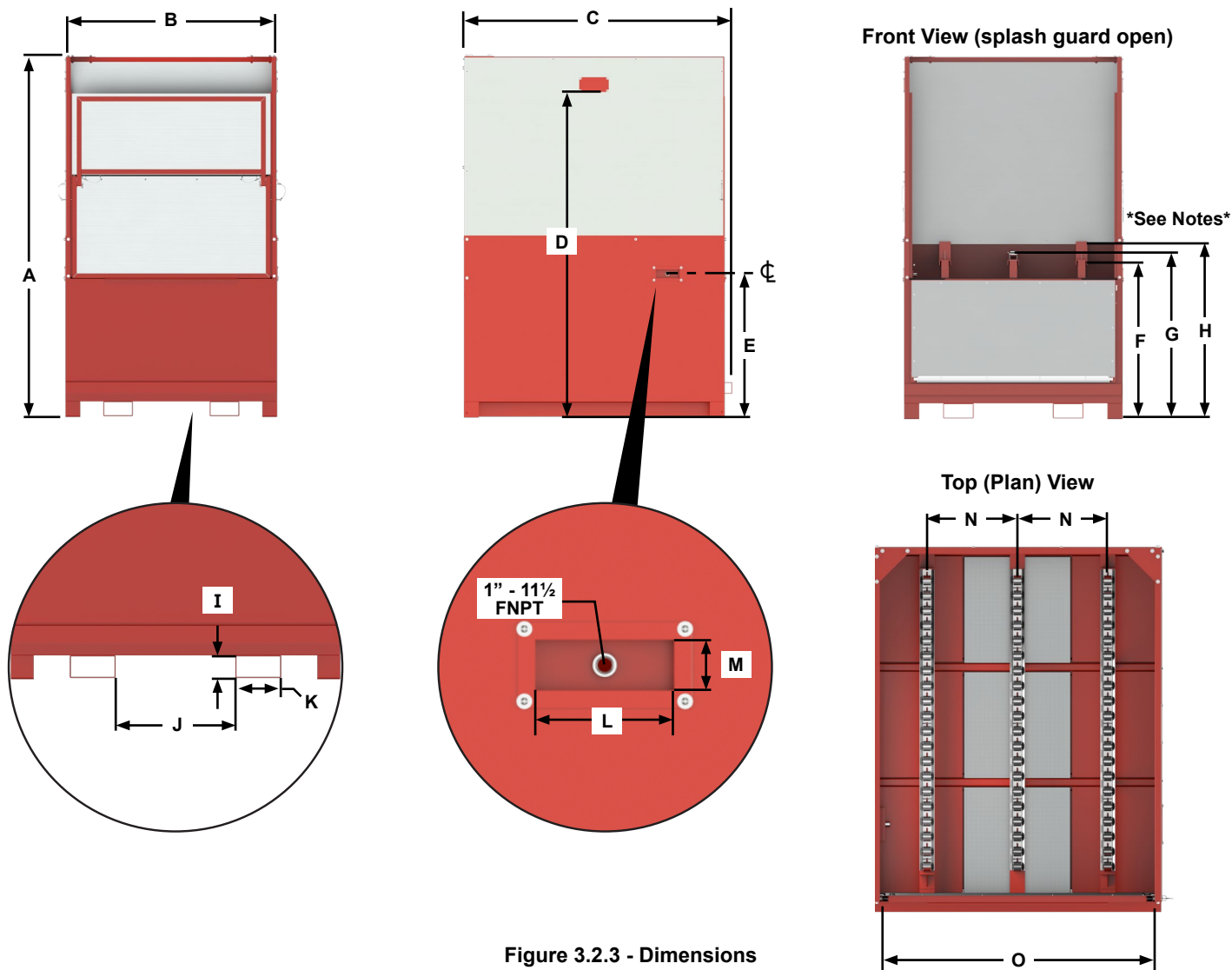


Figure 3.2.3 - Dimensions

Table 3.2.2 – Dimensions

Model	Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
275	Inches	92	57¾	70½	83	32	37	39½	42	ID 3%	21	ID 7%	6½	2½	18	54¾
	mm	2337	1468	1791	2108	813	940	1003	1067	ID 92	533	194	165	63.5	457	1391
330	Inches	98	57¾	70½	88%	38	42¾	45¼	47¾	ID 3%	21	ID 7%	6½	2½	18	54¾
	mm	2490	1468	1791	2251	965	1086	1150	1213	ID 92	533	194	165	63.5	457	1391

Notes:
 F = Distance from floor to top of rollers (for units with rollers)
 G = Distance from floor to top of supports (for units without rollers)
 H = Distance from floor to top of stop bracket (for all units)



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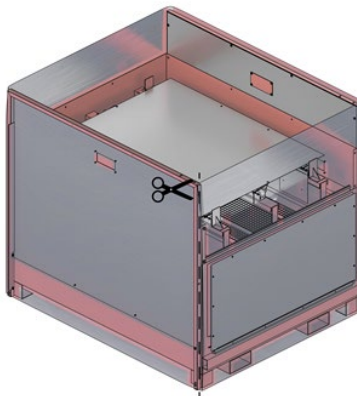
3.3 Ordering Information

Scope of Delivery

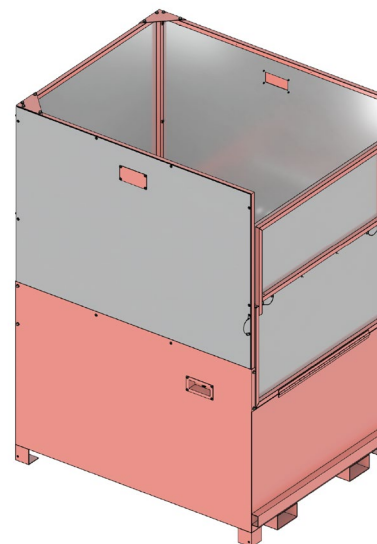
The IBC can be ordered fully assembled or partially assembled (sides down) and with or without rollers. See Table 3.4.1 for ordering information. For partially assembled units, you must complete assembly according to the instructions in this document before putting the IBC into service. Also refer to <https://webtools.vikingcorp.com/ibccontainmentsetup/>.



Scan for Assembly
Animation



Partially assembled



Fully assembled

Table 3.4.1 - Ordering Information

Part Number	Description	Size		Weight		Overall Shipping Dimensions L x W x H (inches)	Volume of Base Unit (with sump)	
		Gallons	Liters	lbs	kg		Gallons	Liters
Fully Assembled								
24119	Model 275 without rollers	275	1040	1090	495	75 x 60 x 93	412.5	1562
24120	Model 275 with rollers	275	1040	1120	508	75 x 60 x 93	412.5	1562
24121	Model 330 without rollers	330	1250	1130	513	75 x 60 x 99	495	1874
24122	Model 330 with rollers	330	1250	1160	527	75 x 60 x 99	495	1874
Partially Assembled (sides down)								
24050	Model 275 without rollers	275	1040	1080	490	75 x 63 x 62	412.5	1562
24554	Model 275 with rollers	275	1040	1110	504	75 x 63 x 62	412.5	1562
23973	Model 330 without rollers	330	1250	1120	508	75 x 63 x 62	495	1874
24555	Model 330 with rollers	330	1250	1150	522	75 x 63 x 62	495	1874
Spare/Replacement Parts								
24147	Flame barrier	21 ¹ / ₄ " x 21 ¹ / ₄ " x 1 ³ / ₈ " (540 mm x 540 mm x 42 mm)						
23966	Catchment basin cover plate	18 ³ / ₄ " x 21 ⁷ / ₆₄ " x 2" (476 mm x 536 mm x 51 mm)						



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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)

6. ASSEMBLY AND INSTALLATION

6.1 Important

Before initial use, partially assembled units must be removed from the packing and assembled according to the instructions below. The procedure will refer to the parts as illustrated in Figure 6-1.

Also refer to <https://webtools.vikingcorp.com/ibccontainmentsetup/>.

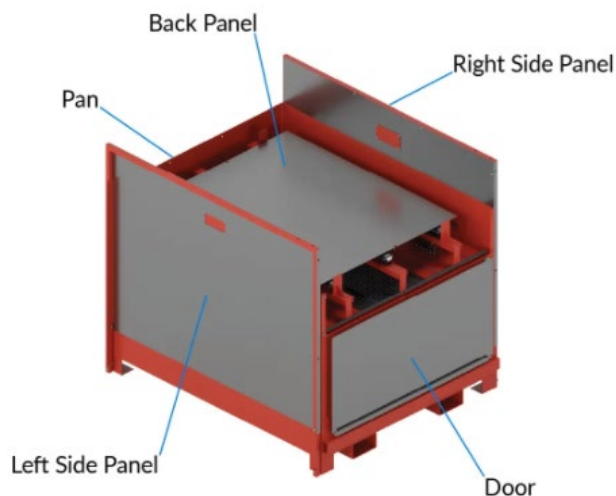


Figure 6-1: Assembly Component Identification

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6.2 Assembly Procedure:

⚠ CAUTION Cutting/crushing hazard.

The component parts are heavy and have sharp edges which can cause personal injury.
 • Wear personal protective equipment (gloves and steel toe boots) when handling components.

NOTICE

The components are heavy and could damage the unit if not handled properly.
 • Two people are required to complete this procedure.

Recommended tools

- Cutting tool (scissors or similar)
- 9/16" Wrench
- Phillips screw driver
- Tape measure

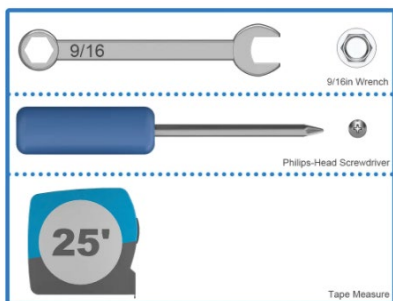


Figure 6.2.1: Recommended Tools

Hardware

Inside the pan, near the front of the unit, there will be a bag of additional hardware. Locate the hardware and remove it from the pan. Set the hardware aside for use later in this procedure.

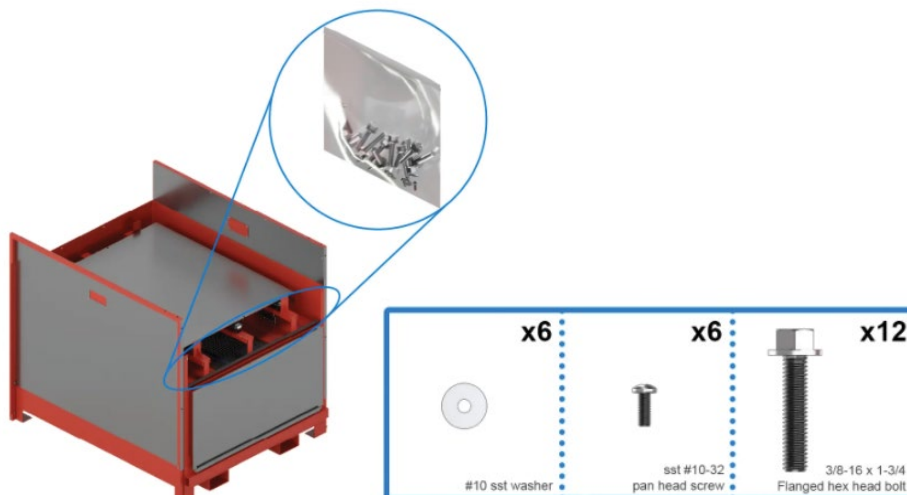


Figure 6.2.2: Hardware



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1. Cut the shipping straps securing the back panel.
2. With the help of another person, carefully lift the back panel up then set it aside.

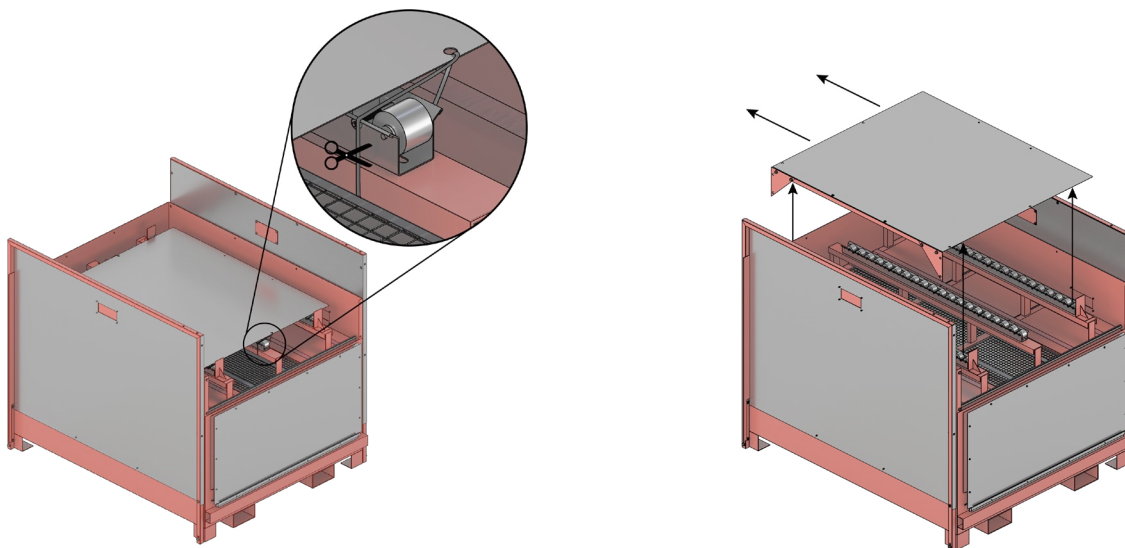


Figure 6.2.3: Removing Back Panel

3. With the help of another person holding the side panel in place, remove the two shipping bolts (A) near the bottom of the unit and keep them nearby for use in a later step.

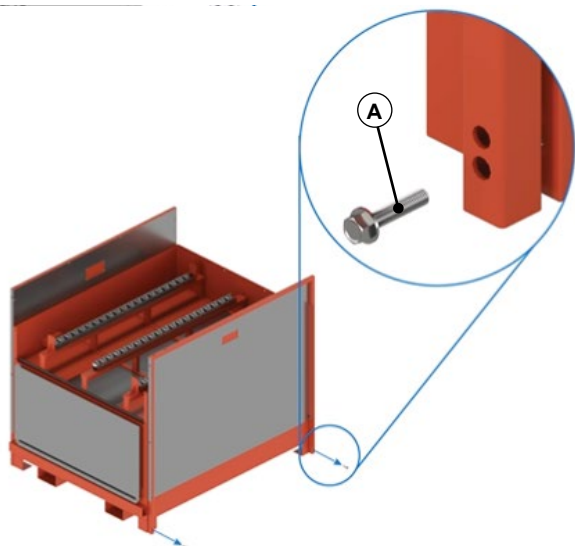


Figure 6.2.4: Removing the Shipping Bolts

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4. Rotate the side panel 180° so that the protruding flange is directed inward.
5. Prepare the side panel by positioning it with the flange facing inward and towards the front of the unit.

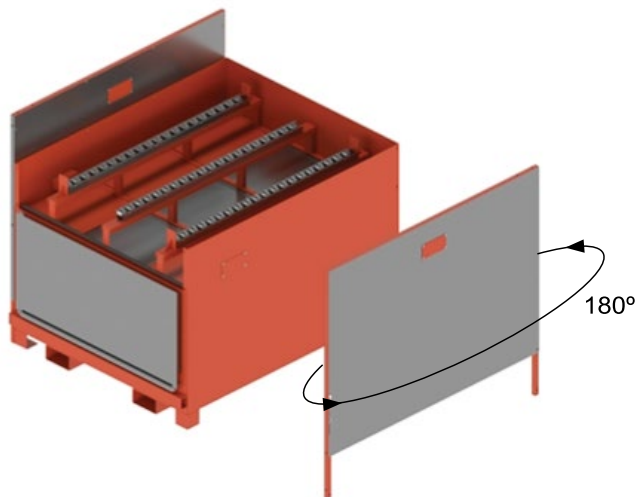


Figure 6.2.5: Rotating the Side Panel

6. Lift the side panel and slide it into the pan.

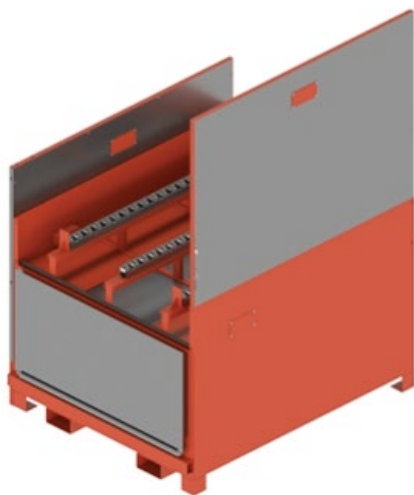


Figure 6.2.6: Placing the Side Panel



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7. With the help of another person to hold the side panel in place, use your fingers to start the threads and hand-tighten the four bolts. **NOTE: Do not tighten the bolts at this time.**
8. Repeat steps 3—7 for the remaining side panel.

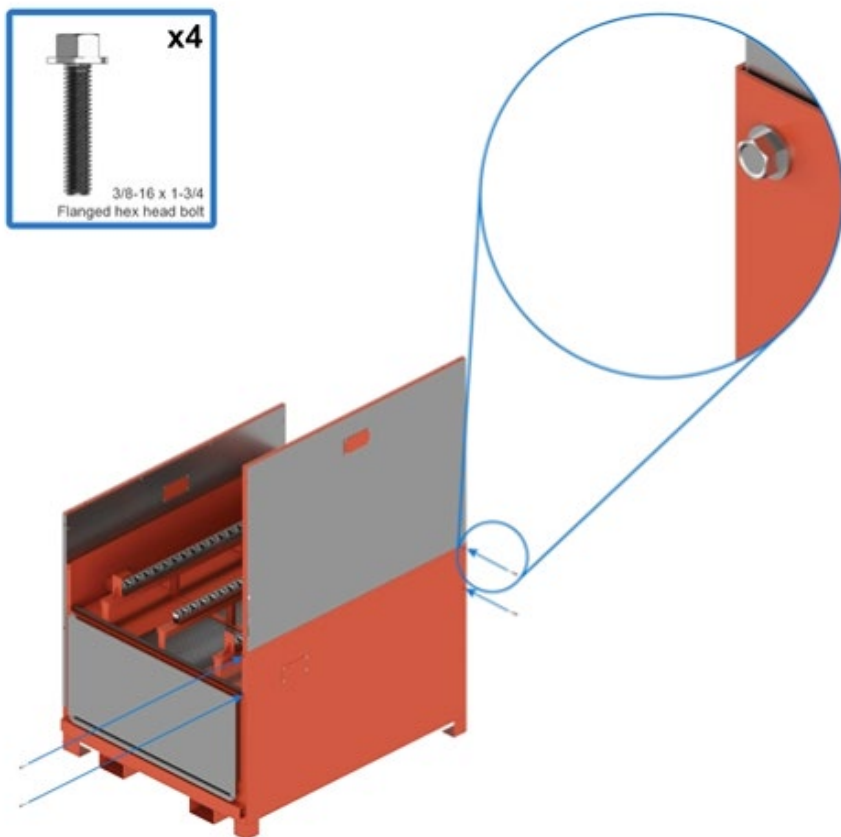


Figure 6.2.7: Installing the Side Panel Hardware



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9. With the help of another person, orient the back panel as shown (Figure 6.2.8) and lift it into place. **NOTE: The bottom edge of the panel will fit between the inside of the pan and the sides that were previously installed.**

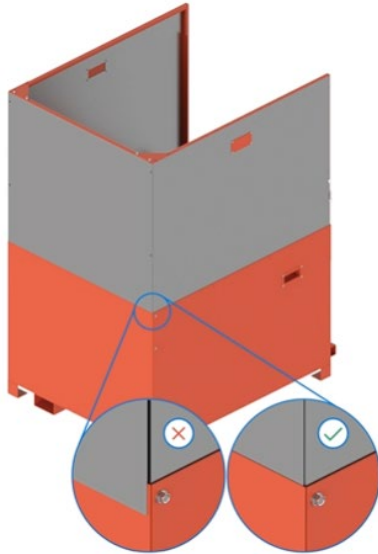


Figure 6.2.8: Placing the Back Panel

10. Use your fingers to start the threads and hand-tighten the eight bolts (B). **NOTE: Do not tighten the bolts at this time.**

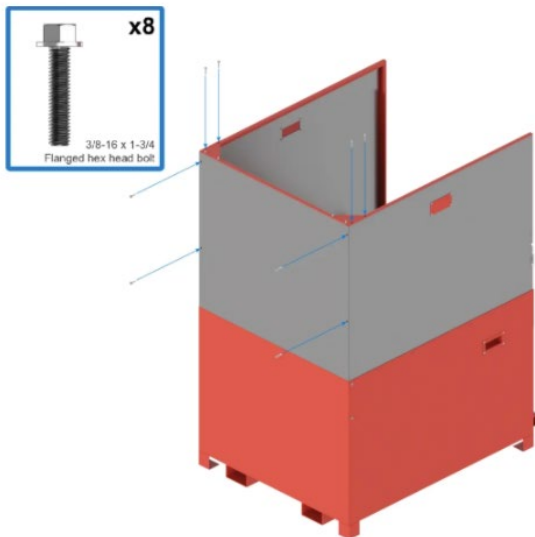


Figure 6.2.9: Installing the Back Panel Hardware



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11. Place a washer before each screw and then use your fingers to start the threads of the six screws. Two each are needed at the bottom of each side and back panel. **NOTE: Do not tighten the bolts at this time.**

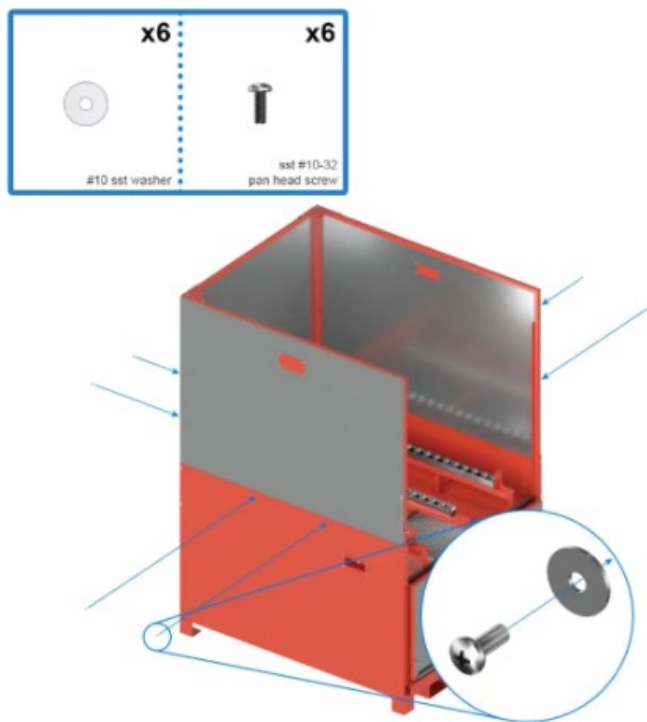


Figure 6.2.10: Installing the Back Panel Hardware



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12. Flip the lower segment of the unit up, and then use the pins on each side to hold the lower door segment in the upright position. **NOTE: You may have to adjust the side panels so the pins fully engage with the door.**

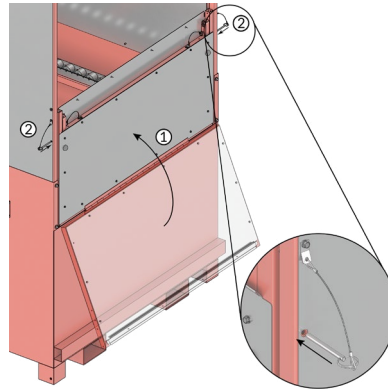


Figure 6.2.11: Closing the splash guard (step 1 of 3)

13. Remove the pin from the locking hole, then rotate the pin 90 degree and insert it into the storage hole.
14. Flip the top half-door section up and hold it in position.

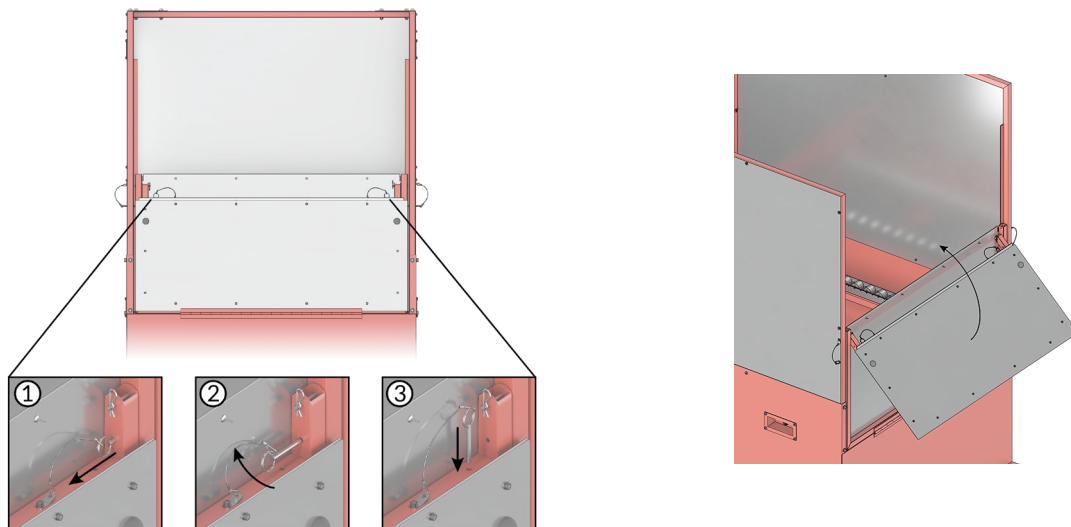


Figure 6.2.12: Closing the splash guard (step 2 of 3)



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15. Remove the pin from the storage hole then rotate the pin 90 degrees and insert it into the locking hole.
16. If necessary, adjust the sides of the unit until the door pins go in and out freely. Preferably, there should be a 3/8 inch gap on both sides of the door. Use an appropriate measuring device on the lower door segment to confirm the gap.

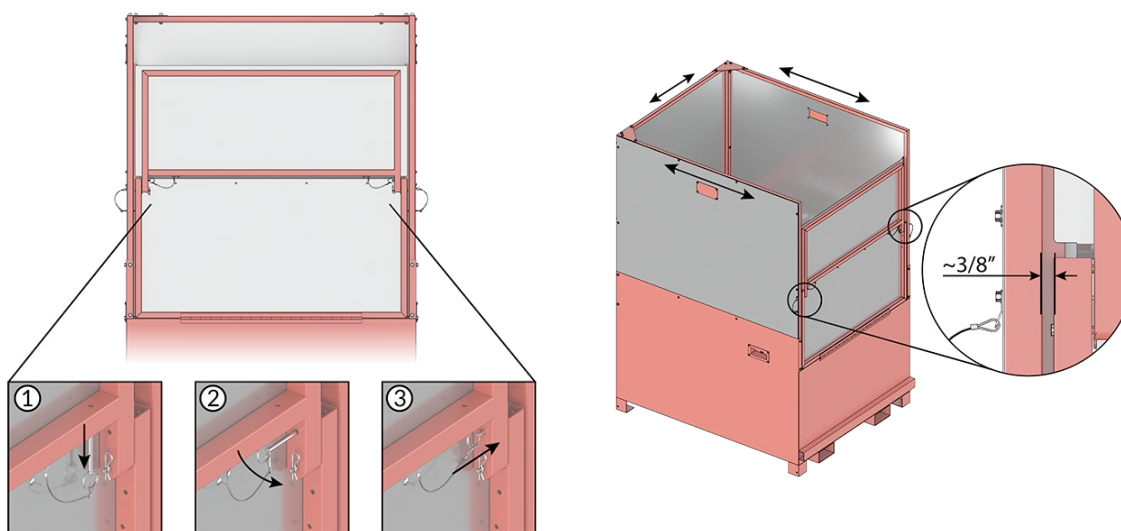


Figure 6.2.13: Closing the splash guard (step 3 of 3)

17. Tighten all hardware. Observe the torque specifications below.
18. Test the door assembly again and adjust the side panels if necessary.

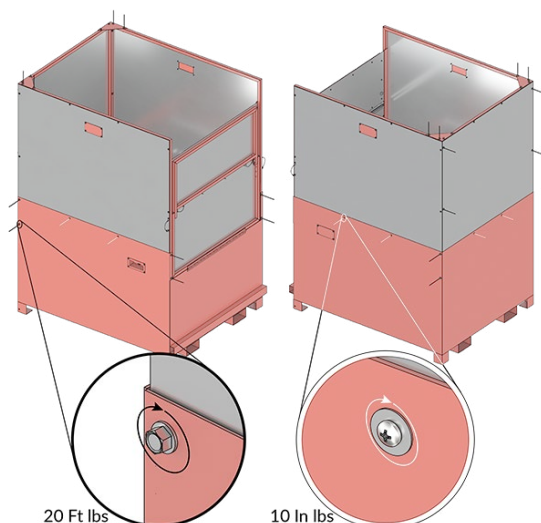


Figure 6.2.14: Hardware torque specifications



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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

NOTICES

- The fire protection containment unit can only be loaded with one composite IBC.
 - 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.
1. Using an appropriate lifting device, lift the IBC above and position it past the stops in the front of the containment unit.
 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**.
 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.

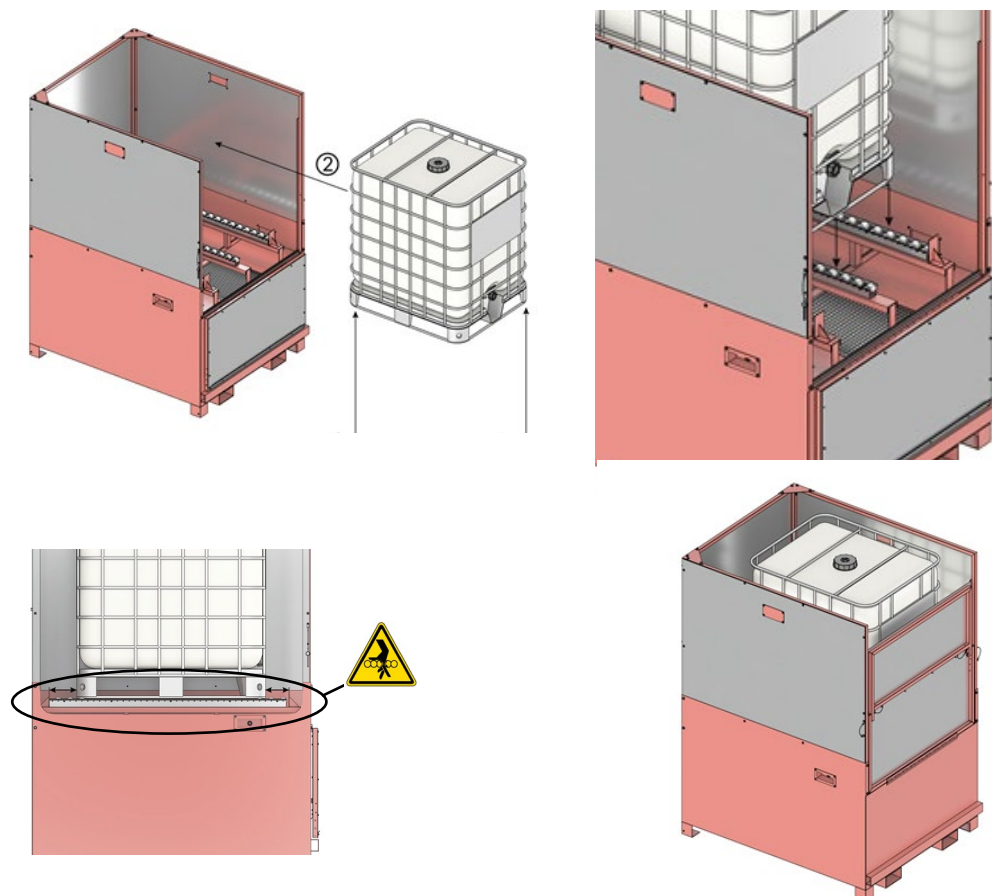


Figure 7.3.1: Loading the IBC into the Unit



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7.4 Configuration (Drain or Fill)

The unit is shipped from the factory with the 1"-11.5 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 12-17)**.

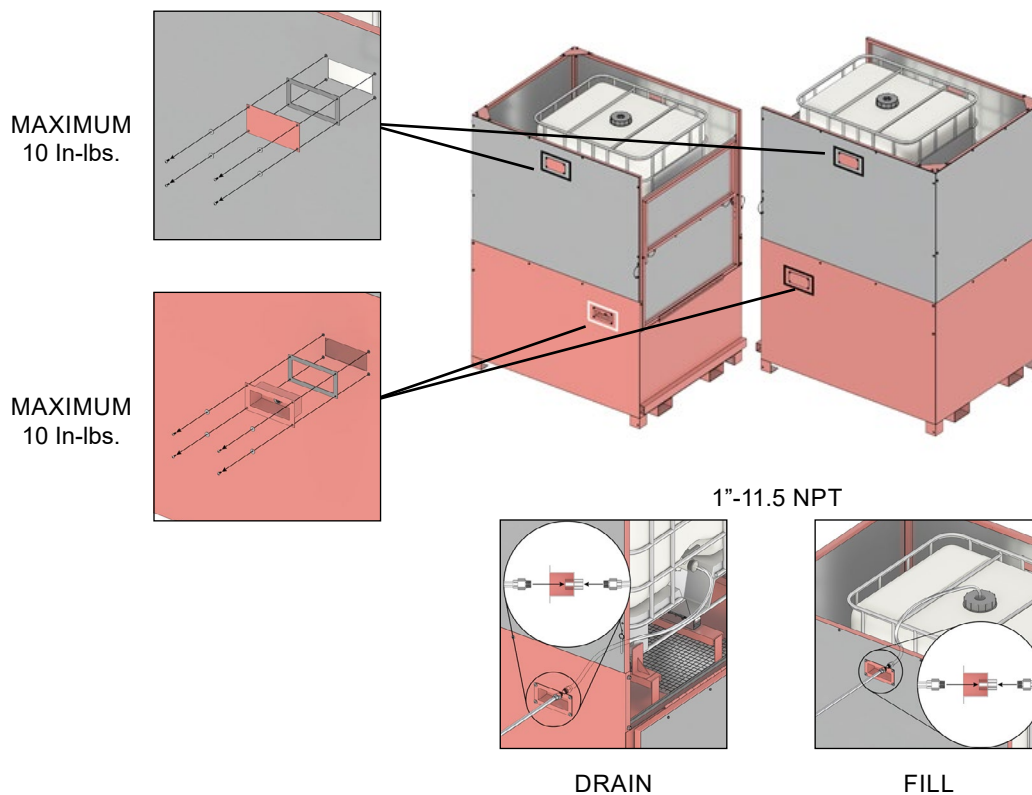


Figure 7.4.1: Configuration



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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.

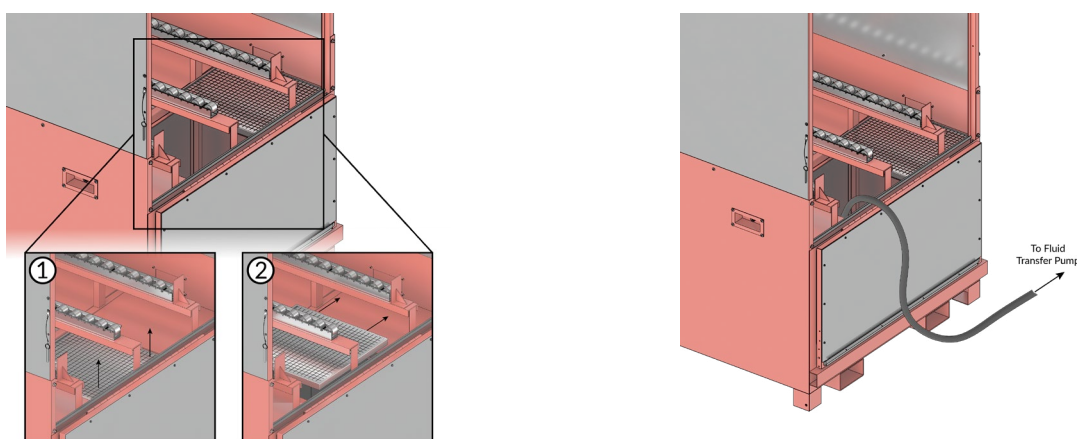


Figure 7.5.1: Emptying the Pan

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, 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.