IBC Storage Unit
For High Flash Point Liquids
Product Datasheet

“Plug and play” protection for ignitable liquid storage

PRODUCT FEATURES

- The unit is based on Safespill’s High Flow Flooring System
- Allows 18 IBC’s to be stored stacked 3x2x3 (WxDxH)
- Deluge sprinkler system activated by heat detection and/or flame detection
- In case of a spill without ignition, liquid detection will activate spill removal only
- The unit is chemically compatible with all hydrocarbons, alcohols and solvents (nickel plating is offered for aggressive acids and caustics)

CONNECTION POINTS

The water supply connection for the deluge sprinkler, floor flushing system, and the discharge piping connection are located at the left or right rear corner of the unit and can be supplied with a thread, flanged or grooved fitting.

SPECIFICATIONS

Overall Dimensions (LxWxH)
25 ft x 15 ft x 14 ft (7.6m x 4.7m x 4.4m)

System Footprint
400 ft² / 38 m²

Product Storage Capacity
18 - 275 gal or 350 gal IBC’s

Drainage Capacity
630 GPM / 2385 LPM

Floor Load Capacity
200 psi / 1.38MPa

Water Supply Connection
1” pipe connection – Flushing System
3” pipe connection – Deluge Sprinklers

Flushing System Water Demand
80 GPM @ 35 psi / 302.8 LPM @ 2.41 Bar

Sprinkler Water Demand
400 GPM @ 100 psi / 1700 LPM @ 6.9 Bar

Discharge Pumps
8 – 3” air operated diaphragm or 3hp electric centrifugal pumps
1 - 4”connection

Power Demand
24 Amps @ 480 V / 3 phase

Price
Starting at $160,000 including installation
FIRE ALARM INTEGRATION

Integration into facility’s fire alarm system is determined by client’s safety philosophy. For example, in the case of a spill without a fire and flushing/suction is activated, client can decide whether to have the unit trigger the facility’s fire alarm, have a signal sent to appropriate personnel, or have a signal activate from the unit.

EXTERNAL CONTAINMENT TANK

The IBC storage unit will need to be connected through piping to an external containment tank. The tank will be used to contain any pumped spilled liquids, and in case of a fire, sprinkler water. Sizing of the external containment tank should be based on the following:

- Total volume of stored IBC’s (18 X 275gal = 4,950gal)
- 20 minutes of sprinkler deluge activation and flushing system activation (400gpm + 80gpm X 20min = 9,600 gal)
- Total tank capacity should be ≥ 14,550gal

In case the facility does not have this containment capacity, a simple and quick solution could be to use a frac tank as containment, which provides a capacity of 21,000 gallons. New frac tanks are readily available at approximately $23,000, used frac tanks are approximately $10,000-$15,000.

DISPOSAL OF SPILLED LIQUIDS

In case clients are concerned about disposal costs for the contents of the containment tank, a simple water remediation system can be installed to separate water from hydrocarbons to permittable contaminant levels, significantly reducing disposal costs. A typical water remediation system used for hydrocarbon-based liquids is approximately $15,000.

INSPECTION & CLEANING SERVICES

We offer our clients the option of having a trained service technician visit their facility, on a recurring basis, to inspect and clean their system ensuring proper function. Inspection programs are site specific.
IBC Push Rack Unit
For Ignitable Liquids
Product Datasheet

“Plug and play” protection for ignitable liquid storage

PRODUCT FEATURES

- The unit is based on Safespill’s High Flow Flooring System
- Water deluge sprinkler system, no foam
- Deluge activated by linear heat and flame detectors
- In case of a spill without ignition, liquid detection will activate spill removal only
- Discharge piping ties into existing containment or a dedicated above ground containment tank
- The unit is chemically compatible with all hydrocarbons, alcohols and solvents (nickel plating is offered for aggressive chemicals)

SPECIFICATIONS

Overall Dimensions (LxWxH)
425 ft² (38.8 m²) 25ft x 17ft x 26ft

Product Storage Capacity
24 IBC’s or palletized containers

Total Water Demand
650 GPM @ 75 psi / 2,461 LPM @ 5.2 Bar

Discharge Pumps (included)
8 – 3” air operated diaphragm or 5hp electric centrifugal pumps

Power Demand
800 CFM / 30 KW

Price
Starting at $235,000 including suction pumps and installation
A combination of in-rack, ceiling and flat nozzle sprinklers provides adequate coverage to all IBCs.

Ceiling sprinkler to protect forklift operator and lateral discharge area.

Flat nozzle sprinklers create a water curtain.

In-rack sprinklers on each level.

*side wall not shown on renderings above
IBC Dispensing Unit
For Ignitable Liquids
Product Datasheet

“Plug and play” protection for ignitable liquid dispensing

PRODUCT FEATURES

- The unit is based on Safespill’s High Flow Flooring System
- Three-walled enclosure with mechanical ventilation and deluge sprinkler protection
- Deluge sprinkler system consists of a combination of targeted sprinkler nozzles for each IBC and upright sprinklers for overall coverage
- Deluge activated by heat detectors and/or flame detectors
- In case of a spill without ignition, liquid detection will activate spill removal only
- The unit is chemically compatible with all hydrocarbons, alcohols and solvents (nickel plating is offered for aggressive acids and caustics)

CONNECTION POINTS

The water supply connection for the deluge sprinkler, floor flushing system and the discharge piping connection are located at the left or right rear corner of the unit. They can be supplied with threaded, flanged or grooved fittings.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>Overall Dimensions (LxWxH)</th>
<th>15 ft x 20 ft x 10 ft (4.6 m x 6.1 m x 3.1m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Footprint</td>
<td>300 ft² / 28.1 m²</td>
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<tr>
<td>Product Storage Capacity</td>
<td>5 - 275 gal or 350 gal IBC’s</td>
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<tr>
<td>Drainage Capacity</td>
<td>400 GPM / 1,514 LPM</td>
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<tr>
<td>Floor Load Capacity</td>
<td>200 psi / 1.38MPa</td>
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<tr>
<td>Water Supply Connection</td>
<td>1” pipe connection – Flushing System</td>
</tr>
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<td></td>
<td>3” pipe connection – Deluge Sprinklers</td>
</tr>
<tr>
<td>Flushing System Water Demand</td>
<td>23 GPM @ 80 psi / 87.1 LPM @ 5.5 Bar</td>
</tr>
<tr>
<td>Sprinkler Water Demand</td>
<td>250 GPM @ 80 psi / 950 LPM @ 5.5 Bar</td>
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<tr>
<td>Discharge Pumps</td>
<td>4 - 3”, air operated diaphragm or 5hp electric centrifugal pumps</td>
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<tr>
<td>Power Demand</td>
<td>400 SCFM @ 100 psi / 32 Amps @ 480 V / 3 phase</td>
</tr>
<tr>
<td>Price</td>
<td>Starting at $135,000 including installation</td>
</tr>
</tbody>
</table>

Inside view of unit without sidewall
FIRE ALARM INTEGRATION
Integration into facility’s fire alarm system is determined by client’s safety philosophy. For example, in the case of a spill without a fire and flushing/suction is activated, client can decide whether to have the unit trigger the facility’s fire alarm, have a signal sent to appropriate personnel, or have a signal activate from the unit.

EXTERNAL CONTAINMENT TANK
The IBC Dispensing Unit will need to be connected through piping to an external containment tank. The tank will be used to contain any removed liquids, and in case of a fire, sprinkler water. Sizing of the external containment tank should be based on the following:

- Total volume of stored IBC’s (5 X 350 gal = 1,750 gal)
- 20 minutes of sprinkler and flushing system activation (250 gpm + 23 gpm X 20 min = 5,460 gal)
- Total tank capacity should be ≥ 7,210 gal

In case the facility does not have this containment capacity, a simple and quick solution could be to use a frac tank for containment; providing 21,000 gallons of additional capacity. New frac tanks are readily available at approximately $23,000 and used frac tanks are approximately $10,000-$15,000.

DISPOSAL OF SPILLED LIQUIDS
A simple water remediation system can be installed to separate water from hydrocarbons creating permittable contaminant levels and significantly reducing disposal costs. A typical water remediation system used for hydrocarbon-based liquids can cost approximately $15,000.

INSPECTION SERVICES
We offer our clients the option of having a trained service technician visit your facility, on a recurring basis, to inspect and certify that your system is functioning properly. Inspection programs are site specific.

Rendering of targeted sprinkler and upright sprinkler layout
“Plug and play” protection for ignitable liquid staging

PRODUCT FEATURES

- The unit is based on Safespill’s High Flow Flooring System
- Water deluge sprinkler system, no foam
- Deluge activated by heat and flame detectors
- In case of a spill without ignition, liquid detection will activate spill removal only
- Discharge piping ties into existing containment or a dedicated above ground containment tank
- The unit is chemically compatible with all hydrocarbons, alcohols and solvents (nickel plating is offered for aggressive chemicals)

SPECIFICATIONS

Overall Dimensions (LxWxH)
- 2 Way Access: 940 ft² (87.3 m²) 47ft x 20ft x 10ft
- 1 Way Access: 740 ft² (68.7 m²) 37ft x 20 ft x 10ft

Product Staging Capacity
- 24 IBC’s or palletized containers

Total Water Demand
- 350 GPM @ 75 psi / 1,325 LPM @ 5.2 Bar

Discharge Pumps (included)
- 4 - 3”, air operated diaphragm or Shp electric centrifugal pumps

Power Demand
- 600 CFM / 22 KW

Price
Starting at $165,000 including suction pumps and installation
Deluge sprinkler system provides overall coverage to all the IBC totes.

Top view of two-way access (discharge piping connection not shown)