

# SPS-9 FOAM MAKER WITH WINDSHIELD & INTEGRAL DEFLECTOR

NDD060

Approvals: UL, ULC

- Superior Foam Expansion For Excellent Foam Performance
- Low Cost Installation Without Welding
- Integral Foam Maker and Deflector which eliminates the need to install a windshield
- Corrosion Resistant Polyester Finish
- Double Aeration Foam Maker



## Description

The SPS-9 Foam Maker with Windshield & Integral Deflector is designed to deliver fully aspirated foam directly to the annular seal area of Open Top Floating Roof storage tanks for fire extinguishment or vapor suppression. Fully aspirated foam provides the most effective performance for all types of foam concentrates, resulting in quick, efficient control of an incident while it is still confined to the seal area. SPS-9 protection systems are classified as Type II discharge devices in accordance with NFPA Standard 11, and deliver low expansion foam directly onto the fuel surface with a minimum of foam submergence and fuel agitation. Minimizing submergence and agitation increases the effectiveness of the foam blanket, resulting in more efficient operation and superior extinguishing capabilities. Fixed discharge outlets have the added advantage of directing the entire flow into the seal area regardless of weather conditions for the most effective utilization of foam resources. Fixed Seal Protection Systems have a long history of prompt, and safe extinguishment, with many incidents controlled so efficiently, that they are often not reported outside the confines of the facility.

The SPS-9 is designed for easy, low cost installation on the top angle of Open Top Floating Roof storage tanks. The integral wind shield and discharge board incorporates slotted mounting holes to allow bolting to the top angle

of the tank, without the need for welding. Tanks without a top angle will require an additional mounting kit. Consult the factory for details. SPS-9 protection systems are compatible with all types of foam concentrate; protein, fluoroprotein, AFFF, and AR-AFFF. Piping coupled to the unit can be linked to a fixed foam proportioning system, or terminated a safe distance from the tank, where foam solution can be delivered via mobile fire apparatus or portable foam proportioning equipment. Installation shall be made in accordance with applicable codes and standards.

## Features

- Superior foam expansion for excellent foam performance
- Low cost installation without welding
- Integral foam maker and deflector which eliminates the need to install a wind shield
- Corrosion resistant red or yellow polyester finish
- Optional corrosion resistant stainless steel models

## Applications

- Open top floating roof tanks

## Specifications

The SPS-9 Foam Maker shall be fully self contained including Aspirating Foam Maker with 2½"-150# FF flanged inlet, High Efficiency Venturi Orifice, Wind Shield, Integral Deflector, and Bird Screen. The integral wind shield

and discharge board shall incorporate slotted mounting holes to allow for bolting the unit to the top angle of the tank, without the need for welding. Solution flow shall be controlled through the use of a high efficiency venturi style orifice. A single assembly size shall provide capacities from 14.1 GPM (53.4 lpm) at 50 PSI (3.5 bar) to 147 GPM (556.4 lpm) at 150 PSI (10.4 bar). See Flow Capacity Chart on page 3 to determine the correct orifice size to meet the flow requirement. The orifice shall be field replaceable in the event of changing design conditions.

The standard wind shield, deflector assembly, and foam maker shall be carbon steel, abrasive blasted and coated with a red or yellow fused polyester powder finish before assembly to insure complete internal coverage. The wind shield, deflector assembly, and foam maker shall also be available in corrosion resistant stainless steel models. Assembly hardware, air inlet screen, and expansion/bird screen shall be stainless steel. The field replaceable orifice shall be of brass construction and have a radius inlet profile for maximum efficiency.

It shall be possible to test the foam maker without discharging into the tank seal area. This shall be accomplished by means of rotating the foam maker assembly 180° away from the wind shield and deflector assembly.

## Approvals and Listings

- UL Listed
- ULC Listed

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## Technical Information

### Material of Construction:

- Wind Shield &
- Integral Deflector .....Carbon Steel  
(316L Stainless Steel Optional)
- Discharge Screen .....Stainless Steel
- Foam Maker Body.....Carbon Steel  
(316L Stainless Steel Optional)
- Foam Maker Jet/Receiver .....Brass
- Air Strainer .....Stainless Steel
- Hardware .....Stainless Steel

**Operating Pressure:** ....50 PSI (3.5 Bar) to  
150 PSI (10.4 Bar)

### Flow Capacity:

- Smallest Orifice..... 14.1 GPM (53.4 LPM)  
@ 50 PSI (3.5 Bar)
- 24.5 GPM (92.7 LPM)  
@ 150 PSI (10.4 Bar)
- Largest Orifice .....84.8 GPM (321.0 LPM)  
@ 50 PSI (3.5 Bar)
- 147.0 GPM (556.4 LPM)  
@ 150 PSI (10.4 Bar)

### Finish:

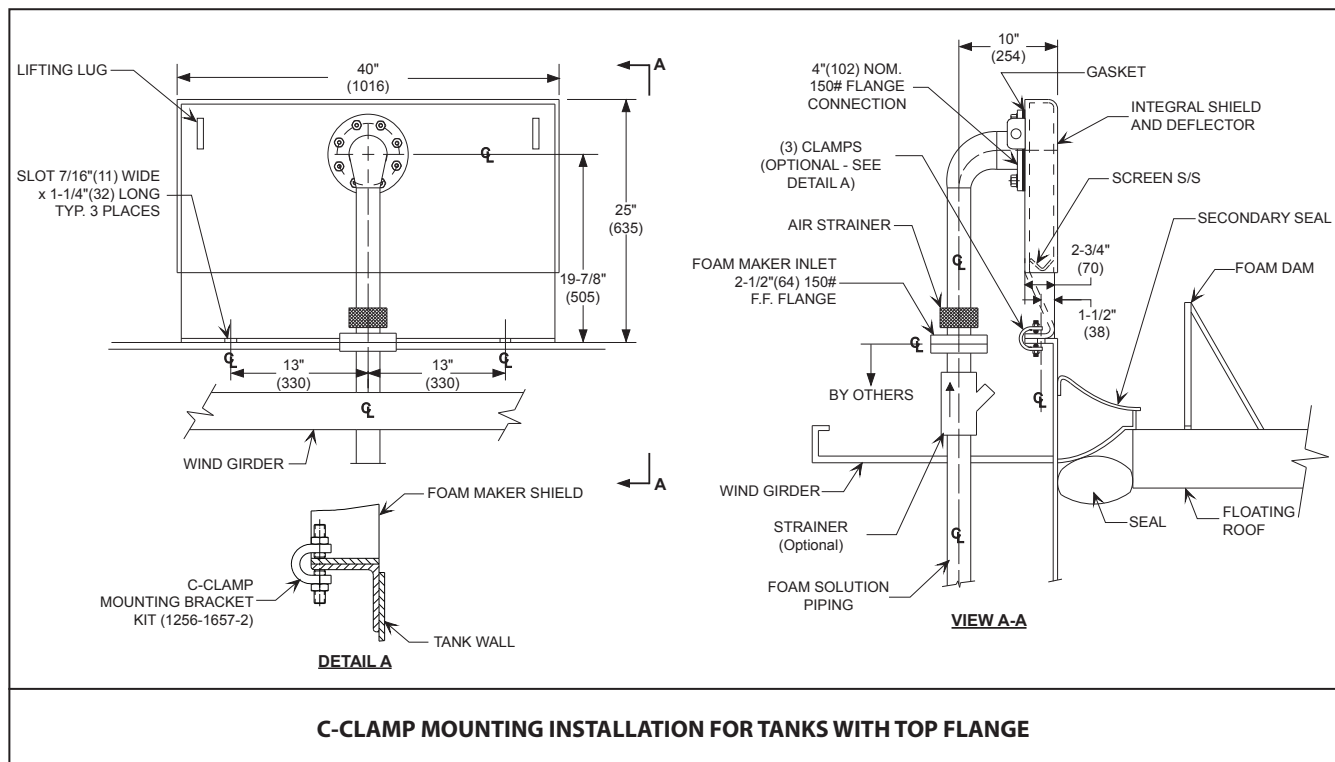
- Carbon Steel Components - Abrasive  
Blast to SSPC-SP6. Chemical wash,  
rinse, and seal. Oven baked fusion  
coated polyester, 3 mils dry film  
thickness (DFT), red or yellow color.
- All Other Components .....Natural Finish
- Stainless Steel Models .....Natural Finish

**Weight:** .....132 lbs. (60 kg)

### Options

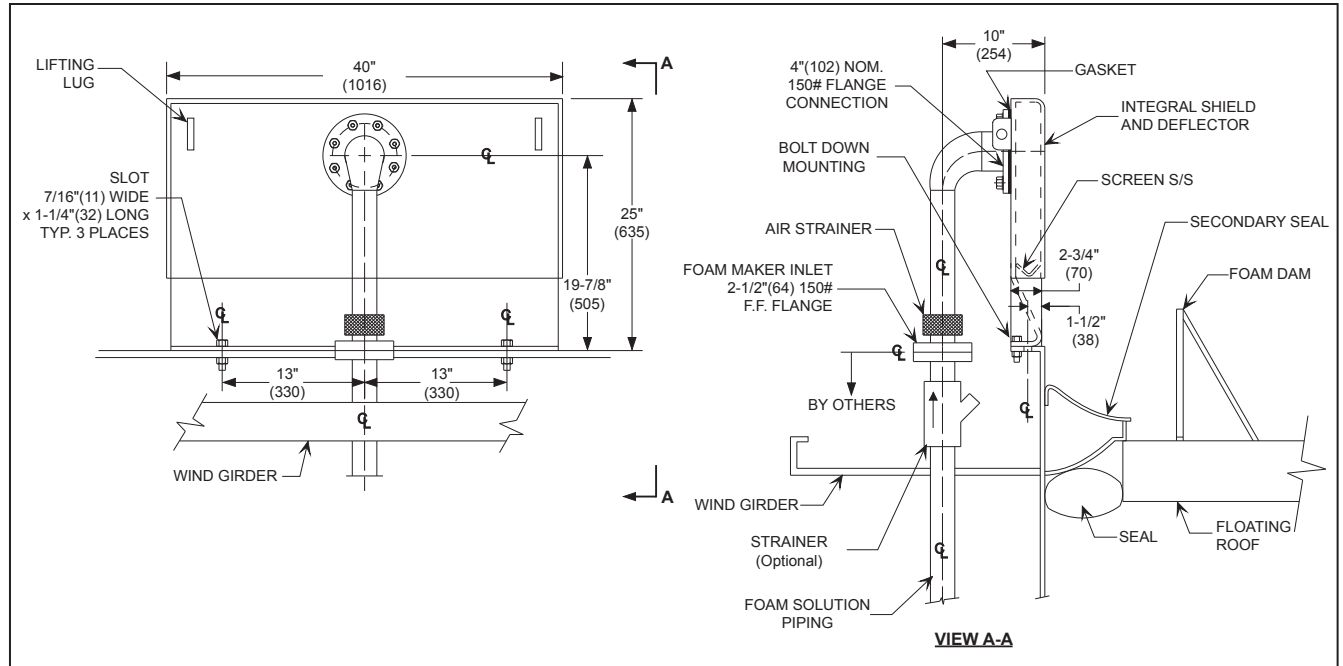
- Mounting Kit for tanks with top angle.
- Mounting Kit for tanks without top angle.
- SPS-9 Wind Bracing Kit.

## SPS-9 FOAM MAKER WITH WINDSHIELD & INTEGRAL DEFLECTOR TYPICAL INSTALLATIONS

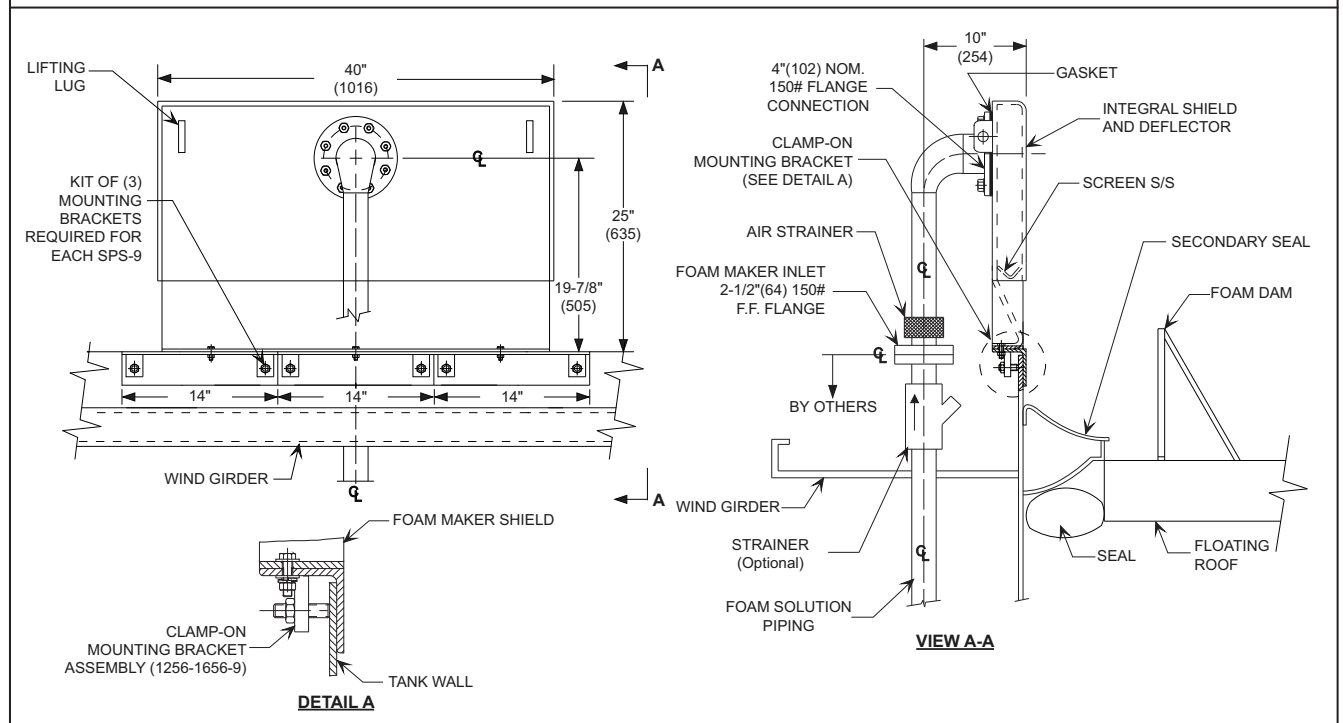


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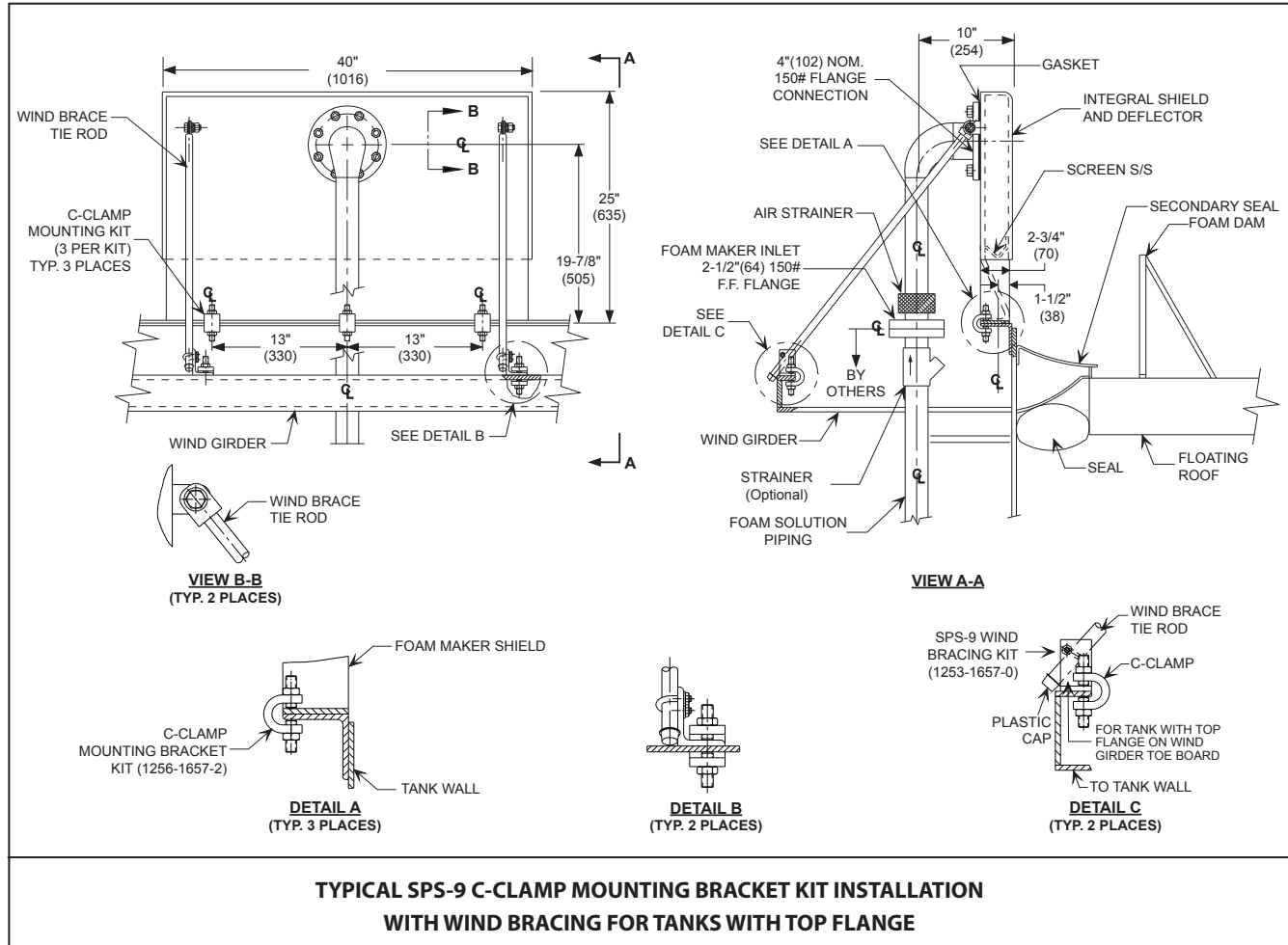
## BOLT DOWN MOUNTING INSTALLATION



## CLAMP-ON MOUNTING INSTALLATION FOR TANKS WITH NO TOP FLANGE

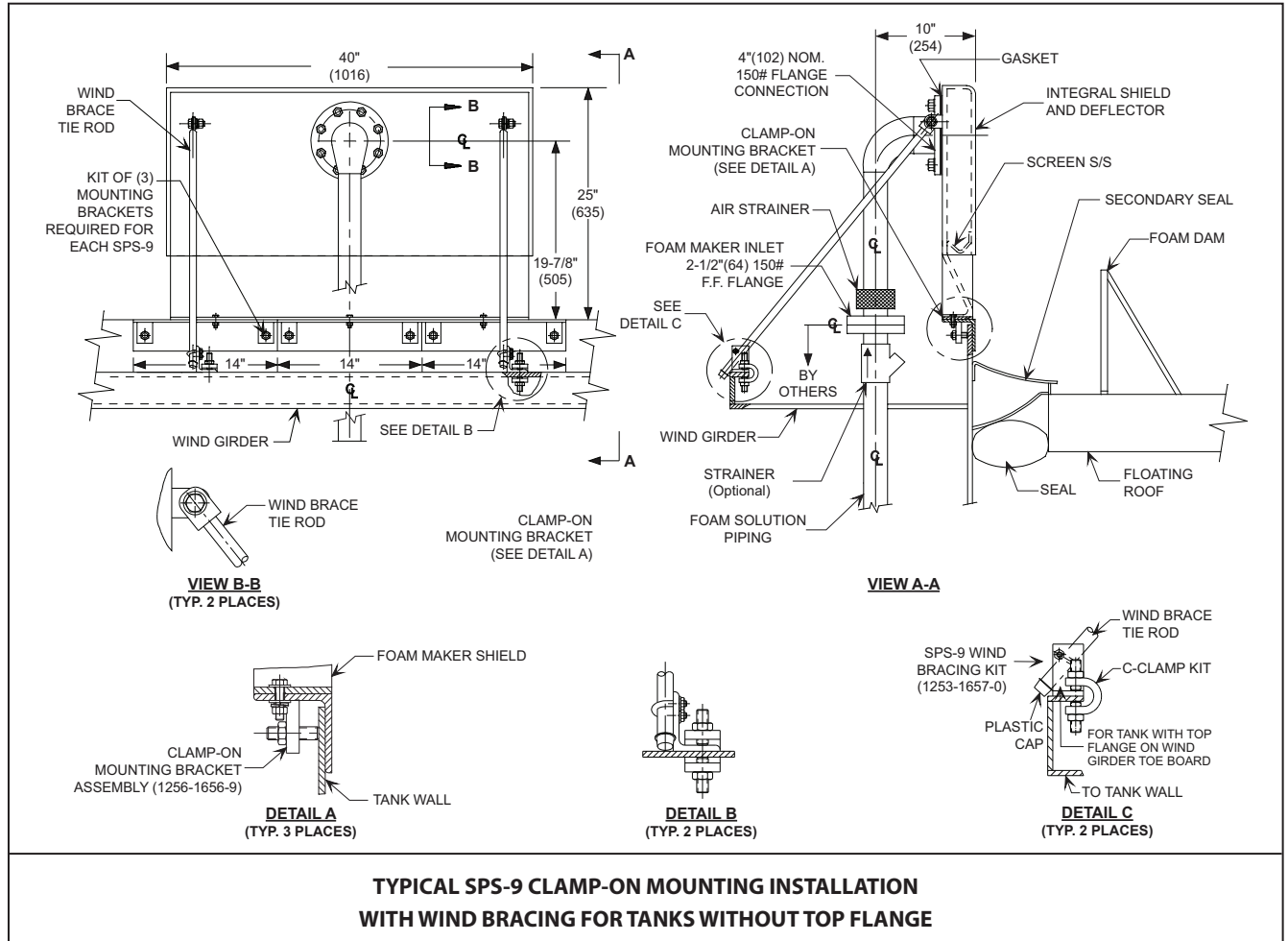
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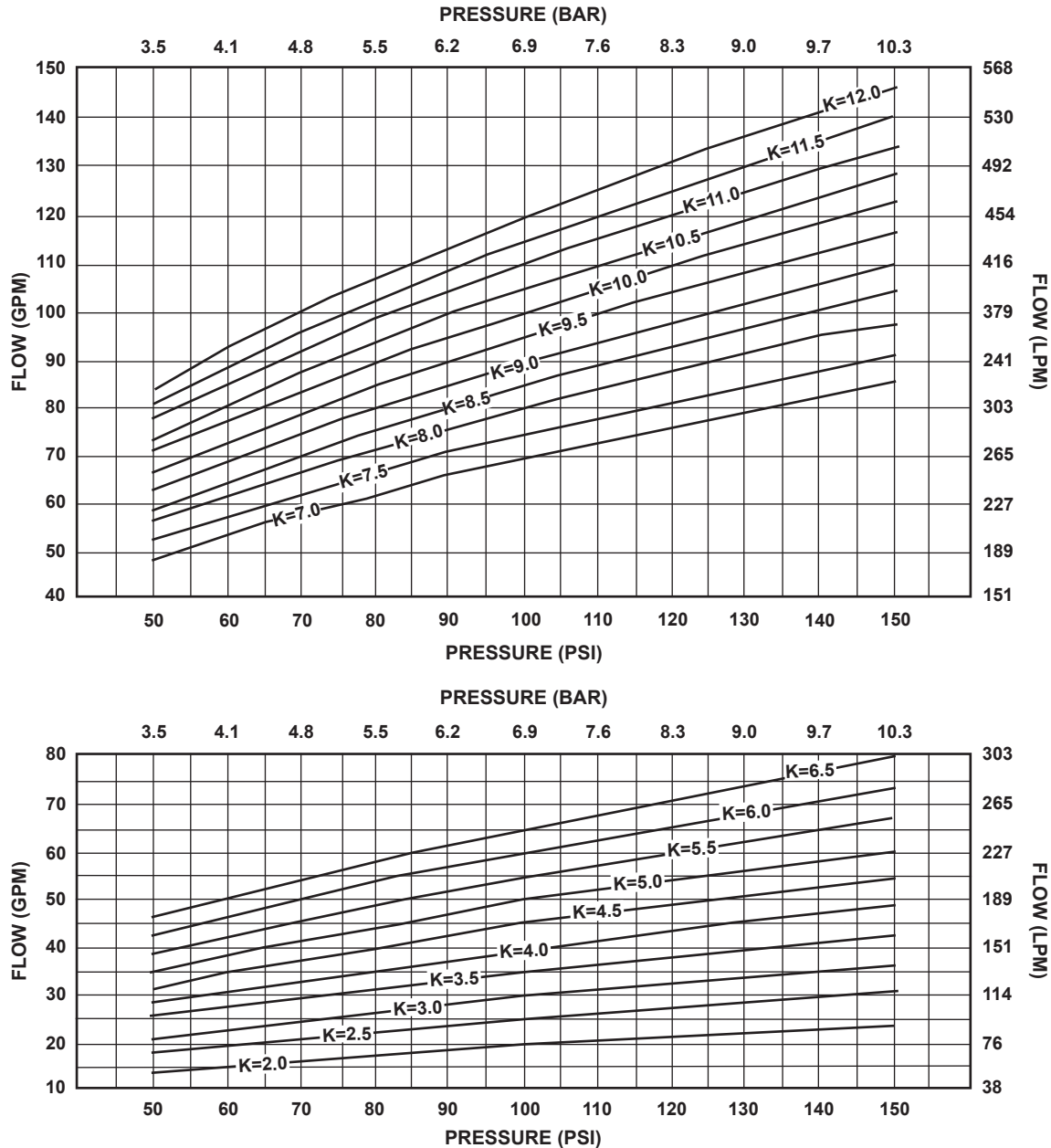
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**To select the correct K Factor:**

Locate the desired inlet pressure along the horizontal axis. Next move vertically to the desired foam maker flow rate. If the intersection of flow and pressure do not fall exactly on one of the K factor lines, choose the next highest K factor line above the flow and pressure intersection point.

**Flow is governed by the equation  $Q = K\sqrt{P}$  where:**

- Q** is the flow in gallons per minutes.
- K** is the orifice factor from the capacity chart.
- P** is the inlet pressure in pounds per square inch.

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ORDERING INFORMATION							
K Factor*	Red	Yellow	316L SS	Approximate		Approximate	
	Foam Maker and Shield	Foam Maker and Shield	Foam Maker and Shield	Lbs.	(kg)	Ft <sup>3</sup>	(m <sup>3</sup> )
2.0	1253-1950-1	1253-1957-1	1253-1960-1	132	(60)	9.25	(0.261)
2.5	1253-1950-2	1253-1957-2	1253-1960-2	132	(60)	9.25	(0.261)
3.0	1253-1950-3	1253-1957-3	1253-1960-3	132	(60)	9.25	(0.261)
3.5	1253-1950-4	1253-1957-4	1253-1960-4	132	(60)	9.25	(0.261)
4.0	1253-1950-5	1253-1957-5	1253-1960-5	132	(60)	9.25	(0.261)
4.5	1253-1950-6	1253-1957-6	1253-1960-6	132	(60)	9.25	(0.261)
5.0	1253-1950-7	1253-1957-7	1253-1960-7	132	(60)	9.25	(0.261)
5.5	1253-1950-8	1253-1957-8	1253-1960-8	132	(60)	9.25	(0.261)
6.0	1253-1950-9	1253-1957-9	1253-1960-9	132	(60)	9.25	(0.261)
6.5	1253-1951-0	1253-1958-0	1253-1961-0	132	(60)	9.25	(0.261)
7.0	1253-1951-1	1253-1958-1	1253-1961-1	132	(60)	9.25	(0.261)
7.5	1253-1951-2	1253-1958-2	1253-1961-2	132	(60)	9.25	(0.261)
8.0	1253-1951-3	1253-1958-3	1253-1961-3	132	(60)	9.25	(0.261)
8.5	1253-1951-4	1253-1958-4	1253-1961-4	132	(60)	9.25	(0.261)
9.0	1253-1951-5	1253-1958-5	1253-1961-5	132	(60)	9.25	(0.261)
9.5	1253-1951-6	1253-1958-6	1253-1961-6	132	(60)	9.25	(0.261)
10.0	1253-1951-7	1253-1958-7	1253-1961-7	132	(60)	9.25	(0.261)
10.5	1253-1951-8	1253-1958-8	1253-1961-8	132	(60)	9.25	(0.261)
11.0	1253-1951-9	1253-1958-9	1253-1961-9	132	(60)	9.25	(0.261)
11.5	1253-1952-0	1253-1959-0	1253-1962-0	132	(60)	9.25	(0.261)
12.0	1253-1952-1	1253-1959-1	1253-1962-1	132	(60)	9.25	(0.261)

\* To determine the correct "K" factor, please see Flow Capacity Chart on page 6.

When ordering please specify the following information:

Tank or hazard identification, tank or hazard size, product being stored, desired flow and inlet pressure. Foam concentrate type and percentage of concentration.

ORDERING INFORMATION	
Optional Accessories	
Description	Part Number
SPS-9 Clamp-On Mounting Bracket Kit for Tanks Without Top Angle	1253-1656-9
SPS-9 C-Clamp Mounting Bracket Kit for Tanks With Top Angle	1253-1657-2
SPS-9 Wind Bracing Kit	1253-1657-0

**Note:** Kits also available in stainless steel. Call for pricing.

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**National Foam**

350 East Union Street, West Chester, PA 19382, USA  
24hr **RED ALERT**® : 610-363-1400 • Fax: 610-431-7084  
[www.nationalfoam.com](http://www.nationalfoam.com)

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