Trusted above all.

Foam Products

Quick Reference Guide

Introduction to foam products

Viking is renowned for the development, manufacturing, sales and distribution of excellent fire protection technologies and has been a dependable partner in fire protection for many decades.

The broad product portfolio encompasses innovative and proven system components for water, foam and gas extinguishing systems as well as fire detection systems and is a reflection of Viking's unwavering focus on providing customers with the finest products and highest level of support.

Through Viking's dedicated and knowledgeable customer service, installers of fixed fire protection systems have access to those quality products and can place their trust in the professional and dedicated support services provided by Viking employees. From the smallest project to the largest endeavour, Viking is their single-point partner with the goal to provide the right material whenever and wherever needed.

Viking is passionate about fire protection and committed to the growth of the fixed fire protection industry. As Viking is completely focused and dedicated to this market, customers can have confidence that Viking has the expertise that they need to be successful. They can count on Viking's resources and technical expertise to help them whenever they have a challenge to overcome. And they can be sure to find the right product or solution for their project with the necessary approval or accreditation.

This quick reference guide provides an overview of Viking's comprehensive range of foam products. Besides access to those products, customers benefit from a market leading technical support team across Europe and the Middle East, which is also holding regular technical training courses on foam systems, products and maintenance. Learn more at www.viking-emea.com.

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Foam storage tanks

The Viking bladder tank requires no external power and is part of a balanced pressure proportioning system used to mix water and firefighting foam together to generate an effective extinguishing medium.

Bladder tanks are used extensively in the firefighting industry due to the effectiveness of the water/foam ratio remaining stable despite variable flow rates and pressure conditions that occur during system operation. This feature makes bladder tanks particularly suitable for multiple hazard systems, sprinkler systems and any other system operating under variable, non-predictable flow and pressure conditions.

Viking also has a range of atmospheric foam storage tanks of various construction types for use with foam pump and dosing systems.

Vertical Foam Concentrate Bladder Tanks

- From 200 to 15,000 litre capacity
- Various pressure ratings
- Standalone or pre-assembled
- Protective coatings available
- Available with various approvals and design codes such as FM, UL, GOST, PED, ASME

Horizontal Foam Concentrate Bladder Tanks

- From 200 to 20,000 litre capacity
- Various pressure ratings
- Standalone or pre-assembled
- Protective coatings available
- Available with various approvals and design codes such as FM, UL, GOST, PED, ASME

Vertical Foam Concentrate Twin Bladder Tanks

- From 200 to 15,000 litre capacity
- Various pressure ratings
- Pre-assembled or skid mounted
- Protective coatings available
- Available with various approvals and design codes such as FM, UL, GOST, PED, ASME

Foam Concentrate Atmospheric Tank with In-line Mixer - Model S/ES

- From 200 to 15,000 litre capacity
- Pre-assembled or skid mounted
- Protective coatings available
- Available with various approvals and design codes such as FM, UL, GOST, PED, ASME

Quickseal Unit

- Self-contained pre-mix foam storage vessel
- For the protection of floating roof tanks
- Available in carbon or stainless steel

Proportioning devices

Viking has a wide range of foam proportioning options available. Choice of product is depending on your project requirements.

Proportioning is a key part of any fixed foam system as it needs to accurately introduce foam concentrate into the water supply to produce foam solution.

Equipment should be carefully selected based upon application, flow rate, foam and system type.

Model ES In-Line Mixer / Eductor

- 225 to 4500 l/min @ 4-12 bar working pressure
- Brass, bronze or aluminium
- 0% / 3% / 6% selector valve available on request

Model KWR Wide Range Bladder Tank Proportioner

- Ensures correct proportioning at low flows such as sprinkler systems
- 4" (100mm) to 10" (250mm)
- Range covers 75 to 16,100 l/min (see specific model)
- Selected models available with FM or GOST approval

Model MIX Bladder Tank Proportioner

- 2.5" (65mm) to 14" (350mm)
- Range covers 100 to 24,000 l/min (see specific model)
- Available with FM or GOST approval

Model VERC Ratio Controller

- 2", 2.5", 3", 4", 6" and 8"
- Horizontal, vertical and pre-assembled to bladder tank installation
- FM approval and UL listing pending with certain foam concentrates

Model VERC In-Line Balanced Pressure Proportioner

- 3", 4", 6" and 8"
- Horizontal or vertical installation
- FM approval and UL listing pending with certain foam concentrates

Proportioning devices

Model BKR Balanced Proportioner

- 4" (100mm) to 10" (250mm)
- Range covers 400 to 25,000 l/min (see specific model)
- GOST approved

Model BKWR Balanced Wide-Range Proportioner

- 4" (100mm) to 10" (250mm)
- Range covers 75 to 16,100 l/min (see specific model)
- GOST approved

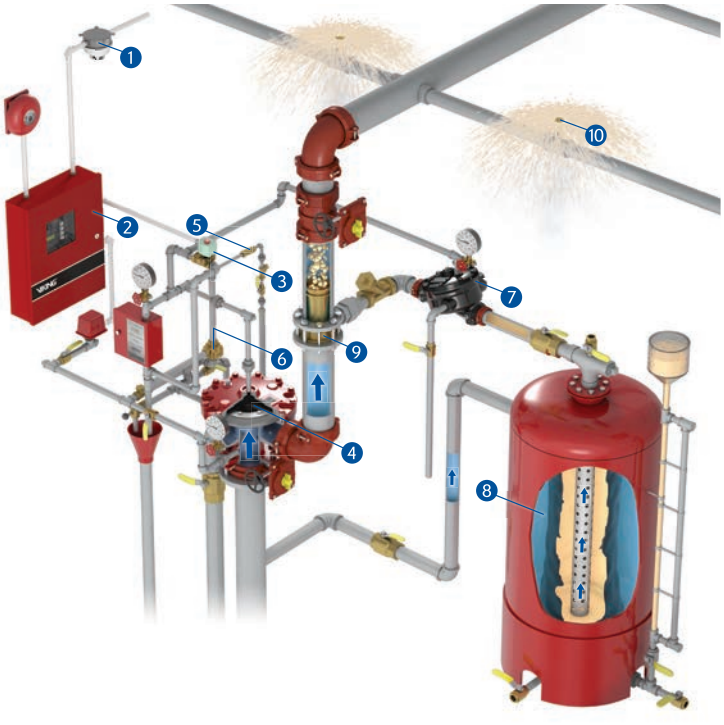
System components

Foam Concentrate Control Valve

- Foam concentrate positive shut-off valve for use with bladder tanks and foam pumps
- 1.5", 2", 2.5", 3" deluge or flow control version
- Grooved, threaded or flanged. Angle or straight through pattern (depending on size)

Foam/Water Deluge Sprinkler System

When the detector (1) is activated by fire, a signal is sent to the VFR-400 Release Control Panel (2). The panel sends appropriate alarm signals and, at the same time, signals the release of the solenoid valve (3). The deluge valve priming chamber (4) is then vented faster than water is supplied through the restricted orifice (5), allowing the deluge valve to open. When the deluge valve operates, pressure opens the pressure operated relief valve (PORV) (6) continuously venting the water to the priming chamber, ensuring the deluge valve remains in the open position. Trim piping, tied into the priming chamber of the Halar-coated concentrate control valve (7), allows that valve to open at approximately the same time, opening the foam concentrate line to the sprinkler system. The outer shell of the bladder tank (8), pressurized by system water, squeezes foam concentrate out to the proportioner (9). As water flows through the venturi area of the proportioner, a metered pressure drop draws foam concentrate into the system water creating a foam solution mixed to the appropriate ratios. This solution then flows through the sprinkler piping and out to the open sprinklers or nozzles (10).



Foam concentrates

Viking offers a wide selection of foam concentrates for use with different system components and discharge devices. We can assist in selection depending on your application and design standard requirements.

All foams benefit from at least one of the following approvals such as: FM, UL, EN1568 Pt 1,2,3,4, GOST, CCCF, ICAO, Lastfire Protocol, Lloyds Register of Shipping, RINA and Bureau Veritas.

Synthetic AFFF 3% "S" Concentrate (Aqueous Film-Forming Foam)

- Extensively tested for use with a wide range of Viking sprinkler heads
- FM approved and UL listed
- Multiple application use on class A and class B (hydrocarbon) fires
- Also available: AFFF 1% A, AFFF 1% F, AFFF1% Plus, AFFF 1% Ultra LT
  AFFF 3% A, AFFF 3% F, AFFF3% Plus, AFFF 3 % Ultra LT, AFFF3% ICAO
  AFFF 6% A, AFFF 6% F, AFFF6% Plus, AFFF 6 % Ultra LT, AFFF6% ICAO

Synthetic AR AFFF 3X3% "S" Concentrate (Alcohol Resistant - Aqueous Film-Forming Foam)

- Extensively tested for use with a wide range of Viking sprinkler heads
- FM approved and UL listed
- Multiple application use on class A and class B (hydrocarbon & polar solvent) fires
- Also available: ARC 1x1 NV, ARC1x3, ARC 1x3 Ultra
  ARC 3x3, ARC3x3F, ARC3x3 NV, ARC3x3 Ultra,
  ARC 3x6, ARC 3x6 Ultra

Synthetic Multi-Purpose LS EXP High Expansion Concentrate

- Highly effective formulation giving bubble strength and slow collapse time
- Tested in large scale fire scenarios
- Certification: EN1568-2, IMO MSC/Circ.670, ISO 7203, GOST, CCCF
- Use with GK100, GAE250, GAE400 and GAE800 High Expansion Generators
- Also available: MB5, MB15, MB HiEx

Fluorine Free Enviro 3x3 Ultra Foam Concentrate

- Totally free from fluorinated surfactants and polymers
- For use on class B hydrocarbon fuels as well as polar solvents
- Certification: EN1568 Parts 1,3 & 4
- Also available: Enviro 3x3 Plus
  Enviro 3x6 Plus
  Enviro 6x6 Plus

Fluoroprotein FP3% Foam Concentrate

- Highly stable foam blanket guards against re-ignition with excellent burn-back properties
- Used in hydrocarbon bulk storage and handling such as refineries and petrochemical facilities
- For use with specific and listed discharge devices
- Also available:

Protein	P3%, P 6%
Fluoroprotein	FP6%
Film Forming Fluoroprotein	FFFP3%. FFFP 3% ICAO, FFFP6%, FFFP6% ICAO

Please see individual technical documentation for further information such as approvals, temperature usage, suitable discharge devices, application/risk types etc.
LT= Low Temperature NV = Non Viscous

Foam concentrates

Film Forming Fluoroprotein Alcohol Resistant 3x3 NV (FFFP-AR)

- Does not contain any polymer that makes general AR type foam concentrates viscous
- High fluidity makes induction easier
- Use on all class B fires including polar solvents with fresh or seawater
- Also available: FFFP ARC 3x3
  FFFP ARC 3x6

Pre Mixed Alpha R-10 Foam Solution

- Ready-to-use foam solution for hydrocarbon and polar solvent risks
- Gives longer term system storage stability compared to "manual" solutions
- Use in self-contained systems such as Quickseal or sprinkler system pipework
- Also available: Alpha B-30, B-30 NE, R-20, NXP35 & NXP-50

Enviro Class A Foam Concentrate

- Also known as "wild fire foam" and "wetting agent"
- Intended for use against class A fires such as wood, paper, textiles or rubber
- Class A foams are often intended for use at very low concentration of 0.1 to 1%

EnviroSenze Simulation Foam

- EnviroSenze products are environmentally friendly foam mimic concentrates with non-foaming properties. They are designed to be used when testing and commissioning foam systems.

  The foam mimic concentrate has been designed to have similar flow behaviour as traditional foam concentrate but has no foaming agents inside. The foam mimic concentrate can also be used to determine induction ratio as measured by conductivity.

Trainer E-Lite Training Foam Concentrate

- Training foams are economical, environmentally friendly, fluorine free foams that mimic the properties of frontline firefighting foams. Training foams enable firefighters to train and test equipment at low cost and with minimal impact on the environment.

Please see individual technical documentation for further information such as approvals, temperature usage, suitable discharge devices, application/risk types etc.
LT= Low Temperature NV = Non Viscous

Discharge devices & nozzles

Viking has an extensive range of aspirated and non-aspirated discharge devices for use in low, medium and high expansion systems.

Viking Sprinklers

- Sprinkler applications are especially challenging for any foam due to the very low operating pressure and expansion reached. Applying foam through a sprinkler head is a very forceful application method and requires foam that can handle direct application and partial submersion into the fuel without losing its fire performance and burnback resistance. Foams that shall be regarded as suitable for Sprinkler applications shall also be able to withstand a limited time of water deluge directly onto the foam blanket without losing its burnback properties.
- Viking K80 and K115 sprinklers have been tested and approved to UL162 and FM5130 using our AFFF3 "S" and AR-AFFF3 "S" type concentrate.

Model MX5 Foam/Water Sprinkler (Stainless Steel)

- Low expansion
- Up to 8:1 expansion
- K-Factor = 40, 57, 80 or 115
- Conventional upright/pendent
- Stainless steel

Model MXD Foam/Water Nozzles (Stainless Steel)

- Low expansion
- Up to 8:1 expansion
- K-Factor = 28, 40, 57, 80 or 115
- Conventional upright/pendent or horizontal sidewall
- Stainless steel

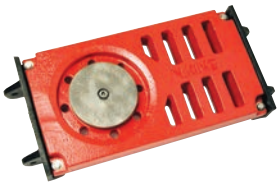
Model US & USD Foam Nozzle (Low Expansion)

- Low expansion
- 120 l/min flow rate with 750 l/min foam production
- Stainless steel

Model UAS Foam Water Nozzle (Low Expansion)

- Low expansion
- K-Factor = 41
- Pendent or upright
- Bronze or stainless steel

Discharge devices and nozzles



Grate Nozzle

- For the protection of aircraft hangers and helipads
- 90 / 180 / 360 degree discharge pattern
- 20" or 26" trench width
- FM approved and UL listed

Model LF Foam Branchpipe / Maker (Fixed)

- Low expansion
- 200, 400, 800, 1,200, 1,600, 2,000, 2,400, 3,200 l/min
- Painted or galvanised carbon steel
- Stainless steel available

Model CS Foam Chamber

- Low expansion
- 200, 400, 800, 1,500, 2,000 l/min
- Painted or galvanised carbon steel
- Stainless steel available

Model VF Foam Pourer - Used with Foam Chamber or Foam Maker

- Low expansion
- 3", 4", 5", 6", 8", 10", 12" connection
- Painted or galvanised carbon steel
- Stainless steel available

Model LFP Floating Roof Tank Foam Pourer

- Low expansion
- Up to 8:1 expansion
- 200, 400, 800, 1,500, 2,000 l/min
- Painted or galvanised carbon steel
- Stainless steel available

Model CSH Foam Generator

- For the protection of fixed or floating roof tanks
- Flowrate of 800 l/min @ 5 bar
- Can be tested without discharging into tank

Discharge devices and nozzles

Model UME Foam Nozzles (Basket Type)

- Medium expansion
- Up to 60:1 expansion
- K-Factor = 27 or 45
- Pendent

Model SME Medium Expansion Foam Branchpipe - Fixed & Portable

- Medium expansion
- 100, 225, 450, 800, 2,000 l/min
- Stainless steel
- Threaded, grooved or flanged connections

Model GK 30 and GK 100 High Expansion Foam Generator

- High expansion @ 450:1 to 630:1 (dependent on foam type)
- 27 or 91 l/min @ 5 bar
- Stainless steel

Model GAE 250 and 400 High Expansion Foam Generator

- High expansion @ 400:1 to 830:1 (dependent on foam type)
- 242 or 378 l/min @ 5 bar
- Stainless steel body
- Carbon steel or stainless steel piping
- Brass or stainless steel nozzles

Model GAE 800 Twin High Expansion Foam Generator

- High expansion @ 400:1 to 830:1 (dependent on foam type)
- 756 l/min @ 5 bar
- Stainless steel body
- Carbon steel or stainless steel piping
- Brass or stainless steel nozzles

Water Powered High Expansion Foam Generator

- High expansion @ 260:1 to 830:1 (dependent on model)
- 107 to 813 l/min
- Stainless steel body
- UL listed

Monitor equipment

Viking offers a wide range of different monitor sizes, construction materials and operation types to suit your varying project demands. We offer manual, self-oscillating, electric and hydraulic solutions with a stainless steel or aluminum bronze body as standard to ensure a longer lifespan and dependability in the field.

To compliment our monitor range we have various aspirating and non aspirating discharge devices with the ability to self induct foam concentrate as required.

Our range of EKM electrical monitors can be fully customized for each project to ensure the highest level of end user flexibility.

KML Manually Operated Monitors - Lever Operated

- 2.5", 3", 4" stainless steel body
- 2,000, 4,000, 8,000 l/min
- Painted RAL3000 or polished stainless steel
- GOST, CNBOP approved

KMV Manually Operated Monitors - Hand-Wheel Operated

- 3", 4" stainless steel body
- 4,000, 8,000 l/min
- Painted RAL3000 or polished stainless steel
- GOST, CNBOP approved

GA Self-Oscillating Unit

- 2.5", 3", 4" stainless steel body
- 2,000, 4,000, 8,000 l/min
- Adjustable from 15° to 360° continuous cycle
- GOST, CNBOP approved

AKML Oscillating Monitors - Lever Operated

- 2.5", 3", 4" stainless steel body
- 2,000, 4,000, 8,000 l/min
- Adjustable from 15° to 360° continuous cycle
- GOST, CNBOP approved

AKMV Oscillating Monitors - Hand-Wheel Operated

- 3", 4" stainless steel body
- 4,000, 8,000 l/min
- Adjustable from 15° to 360° continuous cycle
- GOST, CNBOP approved

Monitor equipment

KML, KMV & KMC Manually Operated Aluminium Bronze Monitors

- Suitable for a wide range of aggressive environments
- 3" aluminium bronze body
- 4,000 l/min
- Natural bronze finish or RAL3000 painted
- CNBOP approved

KM-L Lever Operated Portable Monitor

- 2.5" stainless steel body
- 2,500 l/min
- Available with self aspirating nozzle
- GOST Approved

OKM Hydraulically Operated Remote Controlled Monitors

- 3", 4" stainless steel body
- 4,000, 8,000 l/min
- Supplied with hydraulic power pack
- ATEX version available

EKM Electrically Operated Remote Controlled Monitors

- 3", 4" stainless steel body
- 4000, 8000 l/min
- ATEX version available
- Robust construction, durable mechanics

EKM Panel for EKM Monitor

- ATEX version available
- Automated functions with complex pattern movement
- Advanced functions with intuitive touch screen display interface
- For control of up to 6 monitors

Monitor equipment

Wireless Controller for Electronically Operated Remote Controlled Monitors

- Duplicate ECP panel feature
- Control up to 4 monitors
- ATEX version available

OFX Hydraulically Operated Remote Controlled Foam/Water Monitor Nozzle

- 2.5", 3", 4" BSP thread
- 3,000, 4,000, 8,000 l/min
- For use with monitor OKM
- Aluminium, brass, stainless steel construction (depending on model)

EKM Nozzles for EKM Monitor

- 2.5", 3", 4" BSP thread
- 3,000, 4,000, 8,000 l/min
- Full control of spray pattern from Jet to Fog
- Aluminium, brass, stainless steel construction (depending on model)
- ATEX version available

FX Foam/Water Monitor Nozzle

- 2.5", 3", 4" BSP thread
- 3,000, 4,000, 8,000 l/min
- For use with monitors KML, KMV, AKM, EKM & OKM
- Aluminium, brass, stainless steel construction (depending on model)

FX-A Self-Inducting Foam/Water Nozzle

- 2.5", 3", 4" BSP thread
- 3,000, 4,000, 8,000 l/min
- For use with monitors KML, KMV, AKM, EKM & OKM
- Aluminium, brass, stainless steel construction (depending on model)

Monitor equipment

LS Foam Branchpipe

- Up to 6:1 expansion
- For use with monitors KML, KMV, AKM, EKM & OKM
- Stainless steel body
- Anodized alloy nozzle

LS-A Self-Inducting Foam Branchpipe

- Up to 6:1 expansion
- For use with monitors KML, KMV, AKM, EKM & OKM
- Stainless steel body
- Anodized alloy nozzle

CA Water Branch Pipe

- 2.5", 3", 4" BSP thread
- 1,000 to 8,000 l/min
- For use with monitors KML, KMV, AKM, EKM & OKM
- Stainless steel body
- Anodized alloy nozzle

Model TPM-F Fixed Platform Monitor Tower

- Various heights
- Fabricated to EN14122
- For use with monitors KML, KMV, AKM, EKM & OKM
- Bespoke features available

Model TPM-G Rotating Platform Monitor Tower

- Various heights
- Fabricated to EN14122
- For use with monitors KML, KMV, AKM, EKM & OKM
- Bespoke features available

Trailers & cabinets

Our range of monitor trailers can be fully customized to suit your specific site requirements. They are suitable for use with our fixed or self-oscillating monitor units and will self induct foam concentrate from the on board storage tank. Standard units are available with single or twin axles.

Our Wall Foam Unit (WFU) is particularly suited to small fixed systems such as garage paint shops and/or can be utilized for mobile hose fire fighting. The 25 or 50 litre bladder tank ensures accurate foam induction without having to completely unwind the hose. The accessories, proportioning system and foam storage tank are housed in an aesthetically pleasing cabinet for wall or floor mounting.

KC Self Inducting Monitor Trailer

- 200 litre storage capacity
- Up to 3,000 l/min
- Carbon steel
- Red RAL3000

KCA-2R Monitor Trailer with Tank (Two Wheels)

- 1,000 litre storage capacity
- Up to 4,000 l/min
- Carbon steel
- Red RAL3000

KCA-4R Monitor Trailer with Tank (Four Wheels)

- 2,000 or 2,500 litre storage capacity
- Up to 6,000 l/min
- Carbon steel
- Red RAL3000

Model WFU Foam Wall & Self-Standing Cabinet

- 25 litre bladder tank & 1% mixer
- 90-110 l/min
- Use with fixed and/or mobile discharge devices
- Accurate proportioning and foam induction even if hose is not fully unwound

Model LSB Portable Foam Branchpipe / LSBA Self Suction Branchpipe

- Low expansion
- 225, 450, 800 l/min
- Stainless steel
- Pick-up tube and regulator (LSBA)

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