CHEMGUARD

A Tyco International Company

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Chemguard serves the fire suppression and specialty chemicals fields worldwide with unmatched customer support, high-quality and field-tested products, and the ability to meet customer requirements through product customization. ISO 9001:2008 certified, we lead through innovative research and development, advanced engineering and design, precision manufacturing, and prompt service and delivery.

FIRE SUPPRESSION DIVISION

The comprehensive operation of the Chemguard Fire Suppression Division includes foam concentrate development and production, fire-fighting foam equipment engineering and manufacturing, and foam systems design. We perform ongoing product development and technical support to meet both customer requirements and market demand in our state-of-the-art research and development laboratory and at our on-site Fire Test Facility.

We also manufacture advanced positive-displacement foam concentrate pumps for fire-protection systems and fire apparatus. Chemguard's balanced vertical integration allows us to ensure the integrity of each foam pump by controlling the manufacturing process – from raw materials through quality assurance testing to final delivery.

SPECIALTY CHEMICALS DIVISION

The Chemguard Specialty Chemicals Division produces environmentally responsible fluorochemical surfactants (a major ingredient in fire suppression foam concentrates) for Chemguard as well as for other fire-fighting foam manufacturers worldwide. Chemguard is one of the largest suppliers of fire-fighting foam concentrates and foam concentrate raw materials in the world.

1984 Roger Bower forms Chemguard, Inc. to manufacture dry chemicals used in municipal & industrial applications.

1988 Chemguard earns first UL Listings of AFFF fire-fighting foam concentrate products.

1990 Chemguard product line expanded to more than 20 UL Listed items.

1992 Chemguard moves company operations and facilities to Mansfield, TX.

1993 Chemguard develops and offers a systems hardware product line.

1997 Chemguard acquires HAZ-Tank Fabricators.

1998 Chemguard acquires MSA's high-expansion foam generator product line.

2000 Chemguard initiates the manufacturing of UL Listed foams at blending facilities worldwide.

2003 Chemguard acquires Ciba's Lodyne™ fluorosurfactant and launches Specialty Chemicals division.

2003 Chemguard introduces low-fluorine foam concentrates.

2004 Chemguard acquires Ciba's foam-stabilizer business.

2007 Chemguard begins development of a proprietary line of pump products.

2010 Chemguard acquires Williams Fire & Hazard, Inc.

1984 — CHEMGUARD COMPANY HISTORY AND MAJOR MILESTONES — 2011

FOAM CONCENTRATES

AR-AFFF

Chemguard has been researching, developing, formulating, and distributing high-quality fire-fighting foam concentrates for more than two decades. Our efficient and environmentally friendly UL Listed/FM Approved foam products are used worldwide in challenging industrial, military, municipal, offshore, petrochemical/energy, and transportation/freight/airport applications. In addition, we have secured international approvals for Chemguard foam concentrates, including IMO, ICAO, DNV, LASTFIRE, and EN. We produce our own fluorosurfactant materials and boast 24,000 gallons (90,660 liters) of batch-blending capacity, resulting in high-quality product and timely delivery at cost-competitive prices.

C135

Chemguard alcohol-resistant aqueous film-forming foam (AR-AFFF) concentrates provide rapid control, excellent burnback performance, superior drain time, and low application rates for Class B hydrocarbon fuel fires (diesel, gasoline, kerosene, etc.) and polar solvent, "water-miscible," fuel fires (alcohol, ketones, and methanol products). Our AR-AFFF agents also suppress the vapors emitted from spills of various hazardous materials and can be effective on Class A fires.

CUG

C333

C33LT

C363

AFFF

AQUEOUS FILM FORMING FOAMS

Chemguard aqueous film-forming foam (AFFF) concentrates require low energy input to produce a high-quality foam blanket that floats on and quickly covers the fuel surface. Our AFFF agents provide rapid control, excellent burnback performance, and low application rates.

C303

C301MS

C601MS

C103

C603

C3LT

C6LT

CB

HIGH-X

HIGH EXPANSION FOAM CONCENTRATES

When discharged through a high-expansion foam generator at the correct proportioning rate, Chemguard high-expansion foam concentrates produce a stable foam blanket that quickly engulfs a hazard by completely flooding the area. In addition, the vapor barrier produced by high-expansion foam can suffocate hazards, such as LNG and LPG, reducing the chance of ignition. Effective for a range of hazards – from three-dimensional fires to flammable liquid spills and Class A type fires – our high-expansion foams are used in shipboard applications to protect marine engine spaces, in flammable liquid storage areas and production facilities, and in warehouses, aircraft hangers, and mines.

C2

CX

C2S

AR-FFFP FFFP

CP5332

Chemguard alcohol-resistant film-forming fluoroprotein (AR-FFFP) foam concentrates suppress Class B hydrocarbon fuel fires (diesel, gasoline, kerosene, etc.) and polar solvent, "water-miscible," fuel fires (alcohol, ketones, methanol, and MTBE products).

Chemguard film-forming fluoroprotein (FFFP) foam concentrates provide the burnback resistance of protein with quicker knockdown than conventional protein foams.

CP5362

CP4302

CP4303

CP4603

PROTEIN FLUOROPROTEIN

CP1302

Chemguard offers a wide variety of protein-based fire-fighting agents for users with protein-based systems or protein foam in inventory.

Chemguard fluoroprotein foam concentrates provide better control and knockdown than conventional protein foam concentrates.

CP1602

CP2303

CP2302

CP2602

CLASS A FLUORINE-FREE

Chemguard Class A foam concentrates are used for structural fire fighting, wildland ground and air attack, creating firebreaks, and mop-up operations, as well as for use with compressed air foam systems (CAFSs). Chemguard Class A foam concentrates reduce the surface tension of water, allowing greater penetration into Class A fuels, and give water a foaming ability so it clings to surfaces with minimal runoff, which speeds extinguishment and reduces water usage. In addition to wildland operations, Chemguard Class A foam is effective in fighting many deep-seated fires, such as paper, tires, and wooden structures.

FC

CA

FX

CW

An alternative to AFFF and fluoroprotein foam concentrates, Chemguard specially formulated fluorine-free fire-fighting foam concentrate presents a low environmental impact. Synthetic and substantially biodegradable, our fluorine-free formulation produces a strong and cohesive foam blanket on the surface of the fuel to extinguish fire and suppress fuel vapor.

For further information regarding the applications and listings and approvals of these products, in addition to our full line of foam concentrate fire-fighting solutions, please refer to the "Foam Concentrate Selection Guide" on page 10.

CF3

TRAINING FOAMS

Chemguard's specially designed training foams are suitable for use with fresh or saltwater and can be used with all siliconized dry chemical agents. Synthetic, biodegradable, and environmentally friendly, our training foams and can be proportioned at 3% or 6%.

CSF

SIMUFOAM
Developed for use as a training foam on LP gas-fired training simulators. This product is suitable for checking foam proportioning systems on mobile equipment and has expansion and drainage properties similar to AFFF.

CST

SUPERTRAIN
AFFF performance characteristics during fire training on low-vapor-pressure hydrocarbon fuels, with greatly shortened drain time (and reduced burnback resistance).

DRY CHEMICALS

Chemguard dry chemicals deliver superior and consistent fire performance. Compatible with many foam concentrates – such as AFFF, AR-AFFF, Class A foam, high-expansion foam, and training foam – our fire-fighting dry chemical products are highly effective in twin-agent applications. Chemguard's dry chemicals are classified for discharge performance and are compatible with most brands of fire extinguishers.

PP1001

PP1001

PP1001

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FOAM CONCENTRATE SELECTION GUIDE

PRODUCT CATEGORY	AR-AFFF					AFFF								HIGH-EXPANSION			CLASS A			PROTEIN		FLUOROPROTEIN		AR-FFFP		FFFP				FLUORINE-FREE	TRAINING	
PRODUCT NUMBER	C135	CUG	C333	C33LT	C363	C103	C301	C303	C3LT	C601MS	C603	C6LT	CB	C2	C2S	CX	FC	CA	FX	CP1302	CP1602	CP2302	CP2602	CP5332	CP5362	CP4303	CP4302	CP4603	CP4602	CF3	CST	CSF
SPECIFICATIONS	ULTRAGUARD 1% x 3% AR-AFFF	ULTRAGUARD 3% x 3% AR-AFFF	3% x 3% AR-AFFF	3% x 3% AR-AFFF LOW-TEMP	3% x 6% AR-AFFF	1% AFFF	3% AFFF MILITARY SPECIFICATION	3% AFFF	3% AFFF LOW-TEMP	6% AFFF MILITARY SPECIFICATION	6% AFFF	6% AFFF LOW-TEMP	BLIZZARD AFFF	VEE FOAM HIGH-X	VEE FOAM HIGH-X SALT	XTRA HIGH-X	FIRSTCLASS	CLASS A PLUS	EXTREME	3% PROTEIN	6% PROTEIN	3% FLUORO-PROTEIN	6% FLUORO-PROTEIN	3% x 3% AR-FFFP	3% x 6% AR-FFFP	3% FFFP ICAO	3% FFFP	6% FFFP ICAO	6% FFFP	ECOGUARD	SUPERTRAIN	SIMUFOAM
APPLICATIONS																																
MUNICIPAL HYDROCARBON	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				●	●	●	●	●	●	●	●	●	●	●		
MUNICIPAL POLAR	●	●	●	●	●																			●	●							
MUNICIPAL STRUCTURE	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●											●		
MUNICIPAL WILDLAND																	●	●	●											●		
MUNICIPAL ARFF							●			●			●																			
INDUSTRIAL HYDROCARBON	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●		
INDUSTRIAL POLAR	●	●	●	●	●																			●	●							
FIXED SYSTEM HYDROCARBON	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●		
FIXED SYSTEM POLAR	●	●	●	●	●																			●	●							
LISTINGS AND APPROVALS																																
UL 162 LISTED	●	●	●	●	●	●	●	●	●	●	●											●	●							●		
UL 139 LISTED														●																		
ULC LISTED	●	●	●	●		●	●	●	●	●	●																			●		
UL CLASSIFIED																	●															
USDA FORESTRY																	●															
FM		●			●		●	●																								
IMO MSC.1/CIRC. 1312	●																															
EN-1568-3 (1A)	●	●																		●	●						●		●			
EN-1568-4 (1A)	●	●																														
MIL-F24385F							●			●																						
ICAO-B								●			●															●		●				
LASTFIRE		●																														
UK MINISTRY OF DEFENSE, DEF 42/40																				●	●	●	●									
LLOYD'S REGISTER OF SHIPPING																						●	●									

The percentages shown in the specifications – known as proportioning percentages, proportioning rates, dilution rates, or mixing rates – indicate the units of concentrate in a 100-unit solution. (Example: 1% rate = 1 gallon of concentrate + 99 gallons of water or 1 liter of concentrate + 99 liters of water.)

For AR-AFFF foam concentrates, the first percentage is the proportioning rate for hydrocarbon spill fires, the second percentage is the proportioning rate for polar solvent spill fires (Example: ULTRAGUARD 1% x 3% AR-AFFF indicates a 1% proportioning rate for hydrocarbon fires, 3% proportioning rate for polar solvent fires.)

AFFF foam concentrates have one percentage.

FOAM EQUIPMENT

Chemguard designs, manufactures, and tests an extensive line of high-quality, durable, and field-proven fire-fighting foam hardware – from nozzles to monitors, foam carts, and foam trailers – all compatible with our broad range of foam concentrates. An ISO 9001:2008 certified manufacturer, we offer comprehensive, on-site product fabrication, including metalworking, ASME bladder tank fabrication, finishing, and painting. Chemguard's intensive quality control procedures ensure that equipment shipped from Chemguard reflects our reputation for excellence and is delivered on-time at competitive prices.

HANDLINE NOZZLES

Chemguard's adjustable, constant-flow (including U.S. Coast Guard approved), and low/medium/high-expansion handline nozzles provide a wide range of flexible flow-control options. Ideal for use with AR-AFFF, AFFF, and Class A foam concentrates, our handline nozzles achieve superior foam expansion for quick knockdown and extinguishment. Constructed from brass or Chemlite™ anodized black aluminum, Chemguard nozzles offer a full array of discharge patterns.

ADJUSTABLE

Constructed from brass or Chemlite™ anodized black aluminum, Chemguard adjustable handline nozzles feature a large, rubber, removable pistol grip; durable chrome-plated ball shutoff; and "click settings" for positive pattern positioning, from full fog to straight stream. Chemguard adjustable handline nozzles permit operators to change flow without changing the pattern and can be flushed without shutting down.

CONSTANT-FLOW

Chemguard constant-flow handline nozzles provide a constant fog or straight-stream flow and can be flushed without shutting down. All-brass construction, our constant-flow nozzles include a removable rubber pistol grip; a large rubber bumper; durable chrome-plated ball shutoff; and heavy-duty spinning teeth for a powerful fog pattern. Select models of Chemguard constant-flow handline nozzles are U.S. Coast Guard approved.

LOW/MEDIUM/ HIGH-EXPANSION

Chemguard rugged, portable MINI-X-III and VARI-X-III handline foam nozzles rapidly deploy a foam blanket for fighting spill fires as well as for vapor mitigation from spilled fuels. Designed for one-person operation, these corrosion-resistant nozzles are ideal for industrial and municipal hazmat response and total-flooding applications. Furnished with a matching foam eductor, MINI-X-III and VARI-X-III nozzles produce high volumes of finished foam while utilizing very little foam concentrate.

Available flow rates of 300-1,000 gpm (1,135-3,785 lpm)

Constant-Flow

Available flow rates of 500-1,250 gpm (1,890-4,730 lpm)

Multi-Gallonage

Available flow rates of 300-1,000 gpm (1,135-3,785 lpm)

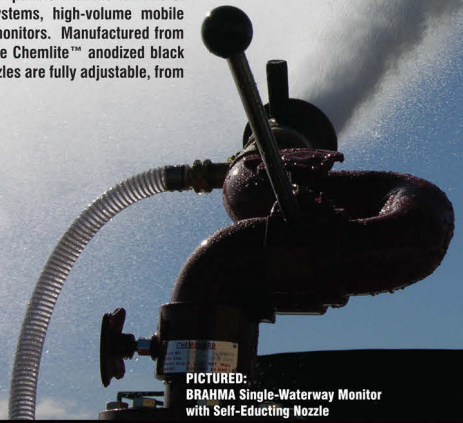
Automatic

Available flow rates of 350-1,000 gpm (1,355-3,785 lpm)

Self-Educting

MONITOR NOZZLES

Chemguard monitor nozzles are compatible with the full line of Chemguard monitors for fixed systems, high-volume mobile units, foam trailers, and portable monitors. Manufactured from corrosion-resistant brass or durable Chemlite™ anodized black aluminum, Chemguard monitor nozzles are fully adjustable, from straight stream to full fog.



PICTURED:
BRAHMA Single-Waterway Monitor with Self-Educting Nozzle

MANUAL MONITORS

Suitable for foam solutions and water-only applications, Chemguard manual monitors feature rugged, corrosion-resistant construction, grease fittings, and stainless-steel ball bearings. Brass BRAHMA single-waterway monitors and RATTLER handwheel monitors – which offer 360-degree rotation – are often used in demanding industrial, marine, and offshore applications, as well as on foam trailers. Lightweight aluminum JACKRABBIT dual-inlet ground monitors meet the demands of municipal fire departments.

RATTLER

JACKRABBIT

IN-LINE EDUCTORS

Chemguard brass, corrosion-resistant, in-line eductors provide an inexpensive and effective method of metering all types of foam concentrate into a water stream. Our eductors feature 0.5%, 1%, 3%, and 6% metering valve selection settings and include an 8-foot pickup-hose assembly.

BRAHMA

MOBILE EQUIPMENT

Chemguard mobile foam equipment – designed and engineered to customers' specifications – is found in a wide variety of critical applications, from tank farms, mines, marine operations, and airports to municipal fire departments and transportation facilities.

FOAM TRAILERS

Chemguard designs and manufactures self-contained, single-, dual-, and triple-tote foam trailers for a wide range of demanding fire suppression and vapor-control applications. Our wide variety of options include variable inlet connections, foam concentrate pumps and piping, proportioning equipment, and self-educting nozzles. Chemguard also offers a full range of direct-injection foam trailers and foam tenders.

SINGLE-TOTE TRAILER

TRIPLE-TOTE TRAILER

DIRECT-INJECTION TOTE TRAILER

MOBILE FOAM CART

Chemguard 36-gallon (135-liter) mobile foam carts include a reinforced-fiberglass tank; a 95 gpm (360 lpm) in-line eductor; a 50-foot (15-meter), rubber-lined, single-jacket fire hose; and pneumatic tires. Equipped with a 95 gpm (360 lpm) handline nozzle with ball shut-off, fully adjustable, from full fog to straight stream.

FOAM SAMPLE TESTING

PRECISION FOAM TEST KIT

Chemguard offers a comprehensive test kit for checking proportioning accuracy and maintaining the effectiveness of both mobile foam equipment and fixed foam systems on site. With our Precision Foam Test Kit, fire-protection professionals can determine foam proportioning accuracy by either conductivity or refractive index.

FOAM SAMPLE TESTING SERVICE

NFPA recommends annual testing of foam concentrate stocks to ensure that fire suppression foams perform as required for their specified applications. Periodic laboratory analysis may be necessary for compliance requirements. For a nominal fee, Chemguard will perform accurate foam sample testing using state-of-the-art laboratory equipment and provide detailed test reports.

SYSTEMS

Chemguard's experienced applications engineers design foam systems to NFPA standards for challenging installations and demanding applications. Our UL Listed/FM Approved custom-engineered fixed and skid-mounted foam systems provide long-term reliable protection for refineries, tank farms, mines, marine operations, airports, transportation facilities, warehouses, storage facilities, and loading-rack areas. Rugged and functional, Chemguard's fixed-system proportioning equipment reflects our years of industry know-how, in-house design expertise, and precision manufacturing.

BLADDER TANKS

PRE-PIPED CONFIGURATION
HORIZONTAL BLADDER TANK

Built and tested to ASME codes and standards, Chemguard UL Listed/FM Approved foam system bladder tanks provide accurate, reliable, and cost-effective foam fire protection for flammable hazard areas. Our bladder tank systems are often used for protection of helicopter decks, aircraft hangers, storage-tank facilities, and flammable-liquid warehouses.

Available in standard and pre-piped configurations, either vertical (25-4,500 gallons, 95-17,030 liters) or horizontal (50-4,500 gallons, 190-17,030 liters), Chemguard bladder tanks operate by water pressure and require no external power. Our pre-piped bladder tanks – designed for ease of installation and use – include all piping and valves.

Chemguard uses UL Listed/FM Approved bladders that are compatible with all Chemguard foam concentrates. Chemguard bladder tanks are available with a variety of options, including a sight glass, actuated valves, stainless steel or brass trim, insulation, and heat-tracing packages.

STANDARD CONFIGURATION
VERTICAL BLADDER TANK

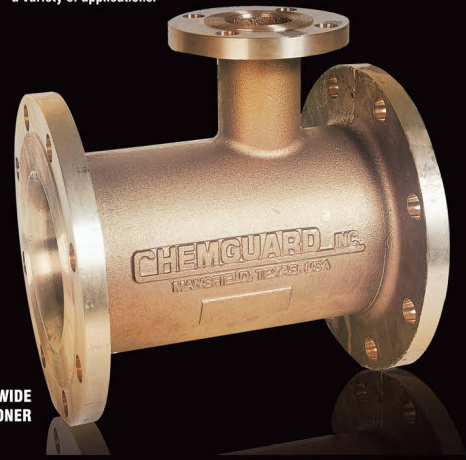
PUMP SKIDS

Chemguard designs and manufactures balanced-pressure (BP) proportioning pump skids and in-line balanced-pressure (ILBP) proportioning pump skids for a wide range of applications. As alternatives to bladder tanks, Chemguard UL Listed/FM Approved pump skids are often used for fire protection in large facilities, such as aircraft hangars and large petrochemical plants. Designed to customer specifications and/or to NFPA standards, Chemguard pump skid systems accurately proportion large quantities of foam concentrate into the water stream over a wide range of pressures and flow rates.

Our skids are equipped with Chemguard-built, UL Listed/FM Approved foam pumps, which enables Chemguard to be fully integrated into the skid-building process. Compatible with all Chemguard foam concentrates, our pump skids are fully tested for quality assurance at our manufacturing facility.

PROPORTIONING EQUIPMENT

Chemguard designs, engineers, and manufactures a broad line of state-of-the-art foam concentrate proportioning devices. Reflecting our years of industry know-how, in-house design expertise, and precise manufacturing, our rugged, high-quality, and field-tested proportioners accurately and dependably proportion all types of Chemguard foam concentrate and water for a variety of applications.



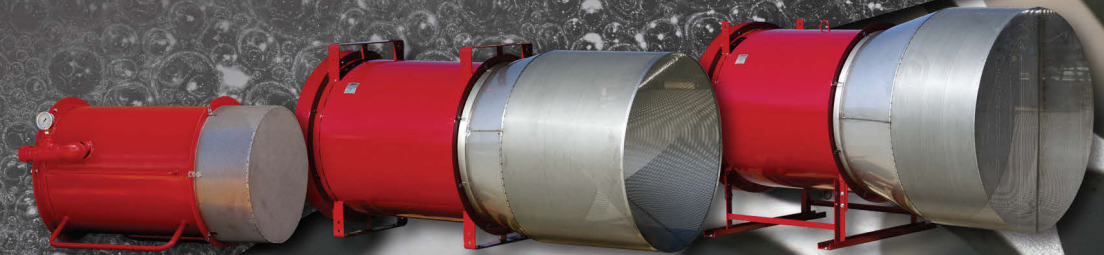
ULTRA-WIDE PROPORTIONER

LINE PROPORTIONER

RATIO-FLOW CONTROLLER

IN-LINE BALANCED-PRESSURE (ILBP) PROPORTIONER

HIGH-EXPANSION FOAM GENERATORS

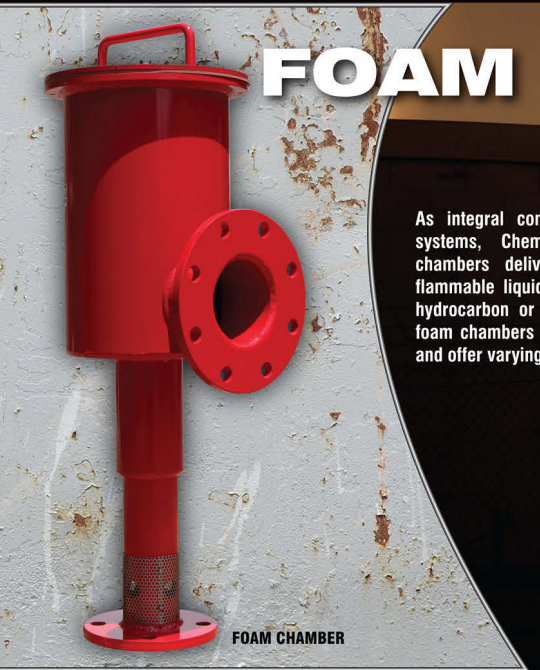


Chemguard water-powered, UL Listed high-expansion foam generators deliver large volumes of high-expansion foam to a hazard or hazard area. Powered by the foam solution, which drives a hydraulic (water) motor, our high-expansion foam generators are used for fire suppression in aircraft hangars, mines, and ships, as well as for vapor suppression and controlling fuel spill fires.

WATER-POWERED OSCILLATING MONITORS

Chemguard water-powered oscillating monitors provide remote protection against fires in aircraft hangars, on helicopter decks, and in refineries, chemical plants, tank farms, and other high-risk areas. Designed to automatically discharge over a specific hazard area upon system activation, our oscillating monitors allow users to specify a preset spray arc at adjustable oscillation speeds. Chemguard's oscillating monitor design eliminates the need for water filtration, reducing the risk of blocked filters or clogged orifices and making our water-powered oscillating monitors the most reliable oscillating monitors in the industry.

FOAM CHAMBERS



FOAM CHAMBER

As integral components of storage tank fire-protection systems, Chemguard UL Listed/FM Approved foam chambers deliver foam directly onto the surface of flammable liquid in storage tanks. Suitable for use with hydrocarbon or polar solvent fuels, Chemguard's rugged foam chambers can be used with most foam concentrates and offer varying flow rates.

FOAM MAKERS AND POURERS

Chemguard UL Listed/FM Approved foam makers, high-back-pressure foam makers, and rim-seal foam pourers are key components of fire-protection systems for protecting dikes and open floating-roof storage tanks, as well as where low-velocity foam flow is desired. Built rugged for harsh and corrosive environments, Chemguard foam makers are suitable for use with hydrocarbon or polar solvent fuels with most Chemguard foam concentrates.

HIGH-BACK-PRESSURE FOAM MAKER

FOAM MAKER

RIM-SEAL FOAM POURER

PRE-ASSEMBLED FIRE-FIGHTING STATIONS

Chemguard supplies versatile and dependable twin-agent units, premix foam units, large dry chemical hose reel units, and hose reel stations for a wide range of fire-fighting applications. Generally used to control fires or spills of flammable liquids, our pre-assembled foam fire-fighting stations commonly are installed in process, handling, and storage areas.

Hose Reel Foam Stations

Chemguard hose reel foam fire-fighting stations are used to control flammable liquid fires and spills in processing, storage, or handling areas. These U.S. Coast Guard approved, fixed, self-contained units operate on water pressure and require no outside power source. Designed for rapid one-man activation, Chemguard hose reel foam stations are suitable for many types of foam concentrate and can be refilled during operation.

Water-Powered Oscillating-Monitor Foam Station

The Chemguard water-powered oscillating-monitor foam station can provide protection for a wide variety of remote hazards where foam is required. Self-contained and operated by water pressure alone, the oscillating-monitor foam station includes a 100-300 gallon (380-1,135 liter) foam concentrate tank, the oscillating monitor, and a self-educting, non air-aspirating nozzle.

Continuous-Flow Hose Reel Unit

Chemguard continuous-flow hose reels provide supplemental foam/water fire protection. Equipped with a booster hose and a handline nozzle, the hose reels are intended for use by trained fire personnel.

Bladder Tank Foam Station

The Chemguard bladder tank foam station provides fire-fighting foam wherever a self-contained, water-powered, foam proportioning system is required. Mounted on a sturdy structural steel frame, the compact station consists of a 36-gallon (135 liter) UL Listed vertical bladder tank and a continuous-flow hose reel. The Chemguard bladder tank foam station meets the guidelines of NFPA 409 Aircraft Hangars for supplementary foam/water handlines.

Premix Units

Chemguard self-contained premix units provide fire suppression capability in areas where flammable liquids are manufactured, stored, and transported. Suitable for various types of premix foam concentrates, our premix units require no outside water source, pumping equipment, or proportioning devices. Configured for one-man operation, Chemguard premix units can be skid or trailer mounted.

Large Dry Chemical Skid Units

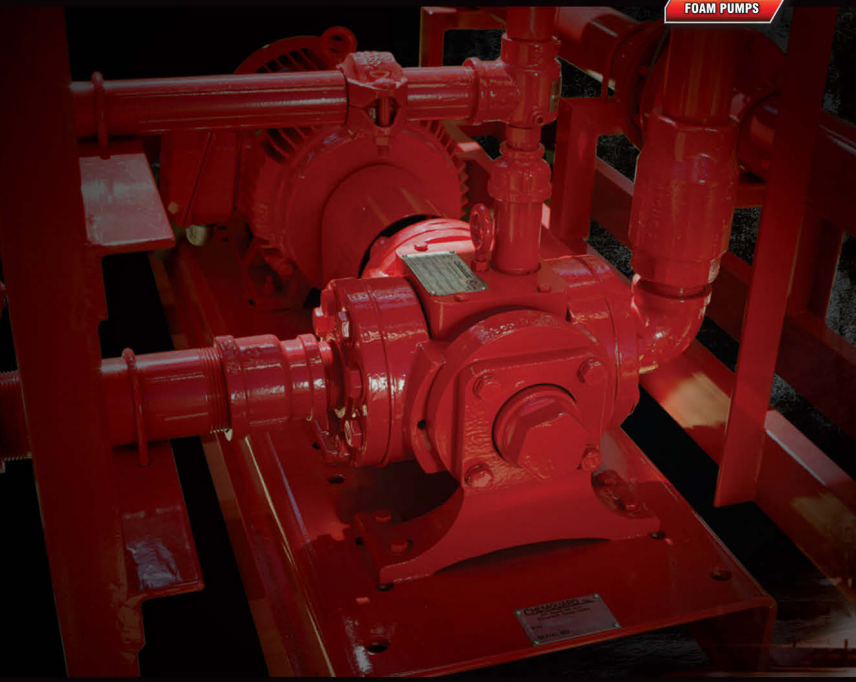
Chemguard engineered and manufactured large dry chemical skid units are used for controlling three-dimensional Class B and Class C fires. Designed for precise control with a single operator, our dry chemical systems extinguish large and challenging flowing-fuel and gas/liquid-pressure fires. Rugged and built to last in harsh environments, Chemguard large dry chemical skid units frequently are used in offshore locations. Self-contained, with no outside power source required, our large dry chemical hose reel systems are configured with fixed or remote hose reels, or with monitors, and are sized from 200-2,500 pounds (90-1,135 kilograms).

Twin-Agent Units

Chemguard engineered and manufactured twin-agent systems utilize the most advanced capabilities of dry chemical and AFFF agents. Effective against three-dimensional and pressurized-fuel fires as well as fuel spills, our self-contained twin-agent units use dry chemical to extinguish the fire and premixed foam solution to secure the spill, with no outside power or water supply required. Components can be mounted on a skid assembly or a trailer.

FOAM CONCENTRATE STORAGE TANKS

Chemguard supplies stainless steel, carbon steel, fiberglass, and high-density, cross-linked-polyethylene atmospheric foam concentrate storage tanks, in a wide range of capacities.



FOAM PUMPS

Chemguard manufactures a complete line of positive-displacement foam concentrate pumps for fire-protection systems and fire apparatus. Built for years of dependable operation in rugged environments, these quiet-running bronze and stainless steel pumps offer flow rates from 5-500 gpm (20-1,892 lpm) at pressures of 40-250 psi (2.8-17.2 BAR) and are suitable for all types of Chemguard foam concentrates. Available as complete pump packages, Chemguard foam pumps are integral components of in-line balanced-pressure (ILBP) foam systems, as well as balanced-pressure pump systems.

P400 Series

P240 Series

P160 Series

P80 Series

P40 Series

Operating Pressure 40 - 250 psi

500 GPM

5 GPM

- EXTREMELY QUIET, NO TIMING GEARS.
- INTERNAL ROTARY GEAR PUMP.
- CORROSION-RESISTANT BRASS AND STAINLESS STEEL CONSTRUCTION.
- SHAFT ROTATION EASILY CHANGED IN THE FIELD WITHOUT SPECIAL TOOLS.
- FEWER MOVING PARTS REDUCES MAINTENANCE, WEAR & TEAR.
- DIESEL ENGINE DRIVES AVAILABLE.
- SINGLE SHAFT SEAL AS OPPOSED TO DUAL.
- TESTED & APPROVED ON FOAM CONCENTRATES RATED UP TO 4,600 CPS.
- INTEGRAL RELIEF VALVE PORT WITH RETURN TO TANK OPERATION CAPABILITY.
- NO SPECIAL MATERIAL CHANGES FOR USING FLUOROPROTEIN CONCENTRATES.

SERVICE & SUPPORT

Chemguard's responsive and effective customer support includes systems engineering, live fire testing, foam sample testing, a variety of training programs, and a global distribution network. Our customer service representatives provide product specifications, and product support data. At Chemguard, we want our products to meet your expectations – around the clock and around the globe.

Chemguard's systems engineers provide fire suppression systems design and applications assistance. Working side by side with our customers, we apply our years of experience designing systems for petrochemical facilities, aircraft hangars, flammable-liquid storage tanks, warehouses, and other challenging installations to maximize performance, efficiency, and effectiveness. Our services include specifications review and consultation, providing value-added engineering alternatives, assessing designs, and on-site commissioning assistance.

SYSTEMS ENGINEERING

Chemguard performs topside and sprinkler live fire tests for a wide variety of test standards and protocols at our on-site Fire Test Facility, including the tests listed on the right. Chemguard also has obtained approvals from DNV based on specific fire standards.

We also conduct customer-specified testing, including side-by-side product comparisons and custom fire test scenarios or protocols with customer-specific requirements in mind. Customers are always welcome to witness fire tests at our Mansfield, Texas, Fire Test Facility.

LIVE FIRE TESTING

UL
FM 5130
MIL-F-24385F
LASTFIRE
ICAO
U.S. Coast Guard
Chinese Standards GB 15308
EN1568
GB 17427
MSC Circ. 582
IMO MSC.1/Circ.1312
DEF(AUST)5706
JFEII
KOFFIS 0103

Chemguard holds regularly scheduled Foam System Design and Application training seminars for sprinkler contractors and design engineers at our Mansfield, Texas, headquarters. A combination of classroom and hands-on activities, these seminars include live fire burn tests, detailed foam system designs for various hazards, and foam equipment demonstrations, maintenance, and testing.

In addition, Chemguard offers ongoing customized training for foam systems design and application professionals at customer locations or at our facility.

FOAM SYSTEMS TRAINING

ON CALL 24/7

Chemguard responds to your emergency – 24 hours a day, 7 days a week – through our emergency hotline:
On Call 24/7 – Worldwide 1.817.473.9964
United States & Caribbean 1.800.222.3710

GLOBAL DISTRIBUTION NETWORK

Chemguard's global distribution network, custom blending facilities, and strategically located warehouses enable us to serve customers quickly and reliably throughout the world.

SUPPLEMENTAL INFORMATION

ENVIRONMENTAL COMMITMENT

Chemguard is committed to protecting the environment, as well as to supplying products that will effectively protect people, equipment, structures, and property. We are proud to offer the most extensive line of effective, environmentally friendly fire-fighting foam concentrates in the industry.

Chemguard is listed as a participating formulator with CleanGredients, a database of institutional and industrial ingredient chemicals that is closely associated with the U.S. Environmental Protection Agency Design for the Environment program. (See cleangredients.org/about/subscription/subscribers.)

SPECIALITY CHEMICALS

Chemguard's research-based Specialty Chemicals Division produces a rapidly expanding selection of fluorosurfactant and hydrocarbon surfactant specialty chemical products for formulating all types of fire-fighting foam products.

The Specialty Chemicals Division also manufactures a comprehensive line of high-performance specialty short-chain fluorosurfactants for the coatings, graphic arts, oilfield, and cleaners industries, including anionic, cationic, amphoteric, and nonionic fluorosurfactants. These products are very effective in reducing surface tension, improving leveling and wetting, increasing anti-blocking, imparting water and oil resistance, and eliminating surface defects in coatings.

RESEARCH AND DEVELOPMENT

Ongoing research and development is integral to Chemguard's leadership position. We are committed to continuous innovation to meet customer requirements and market demands. In recent years, we have expanded our laboratory facility and invested in additional state-of-the-art equipment. Our research staff, which includes Ph.D. chemists and other highly experienced chemists and technicians, is available to answer product questions and assist customers with specific application requirements.

INDUSTRY AFFILIATIONS

As a global leader in fire-fighting foam concentrate, equipment, and engineered systems, Chemguard has broad industry affiliations, including:

- National Fire Protection Association (NFPA)
- National Fire Sprinkler Association (NFSA)
- American Fire Sprinkler Association (AFSA)
- Fire Fighting Foam Coalition (FFFC)
- Society of Fire Prevention Engineers (SFPE)

CERTIFICATIONS AND LISTINGS

The industry and government certifications and listings received by Chemguard reflect the dependability of our research, development, and testing; the high quality of our manufacturing processes; and the effectiveness of our customer support. Our certifications and listings include:

- ISO 9001:2008
- Underwriters Laboratories (UL) Listing
- Factory Mutual (FM) Approval
- American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section VIII, Division 1 Latest Addenda, certification for bladder tanks, dry chemical tanks, and premix tanks
- DNV Type Approval to IMO MSC.1/Circ.1312
- International Civil Aviation Organization (ICA0)
- QPL Mil Spec Mil-F-24385F
- USDA QPL 5100-307
- Chinese National Standard GB 15308
- Pojtest (All Russian Research Institute for Fire Protection)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