

S-CR-LR-K-1000-C S-CR-LR-K-2000-D Stationary Dry Chemical Systems (INDIA)

Features

- Fast knockdown of fires
- Unique fluidization techniques
- Extensive full-scale testing
- Proven reputation
- Underwriters Laboratories (UL) and Underwriters Laboratories Marine (UL Marine) Listed

Applications

The ANSUL® S-CR-LR-K-1000-C and S-CR-LR-K-2000-D Stationary Dry Chemical Systems are manufactured to provide manual firefighting protection for hazardous areas such as offshore platforms, loading racks, petrochemical facilities, marine applications, fuel storage areas, and heavy manufacturing operations.

Description

The ANSUL® S-CR-LR-K-1000-C and S-CR-LR-K-2000-D Stationary Dry Chemical Systems combines the flexibility of a hand portable fire extinguisher with the greater suppression capability necessary to combat large Class B (flammable liquids and gases) and Class C (electrical) fires. The ANSUL® Stationary Dry Chemical System is designed for operation by trained persons, and ideally suited for protection of hazardous areas where large fires must be suppressed before they have the chance to spread or increase in size.

The ANSUL® Stationary Dry Chemical System offers the quick response, large suppression agent capacity, longer discharge time, and increased flow rates necessary to combat these large fires. In short, the ANSUL® Stationary Dry Chemical System protects areas where hand portable and wheeled fire extinguishers cannot. Standard units are manufactured with a skid base.

Stationary Skid Unit Capacities

The dry chemical tank is constructed of welded steel and is designed and constructed according to the latest ASME Unfired pressure vessel code for a maximum working pressure of 230 psi (15.85 bar). The container has one fill cap consisting of a cast, anodized aluminum body equipped with two handles to allow hand tightening. The nitrogen cylinders in this system meet IS: 7285 (PT 2), and has an UL Listed Quick-Opening Valve. The nitrogen supply is directed through one regulator per nitrogen cylinder. The regulator is designed for an inlet pressure of 3000 psi (206.8 bar) and is set to deliver nitrogen at a reduced pressure of 195 to 215 psi (13.4 to 14.8 bar) at 70 °F (21 °C).

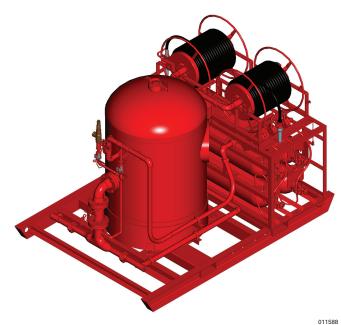


Figure 1: S-CR-LR-K-2000-D-PESO, IND

Each individual regulator has a spring loaded pressure relief

The dry chemical distribution outlet to the hose lines is assembled with brass pipes and fittings. The burst disc is constructed of nickel and is pre-scored to help ensure a positive full burst at rated pressure. The hand hose line nozzle consists of a two-position ball valve and barrel.

A pneumatic actuation system utilizing a nitrogen filled cartridge opens the nitrogen cylinders and energizes the system. The cartridge triggering device includes a pull pin release and a strike button, providing a two-step release.

The skid is constructed of welded steel, and is sized and reinforced to provide the required strength of the intended application. The skid is provided with fork lift pockets for moving the skid. An optional rugged steel lifting bar can be provided with the skid unit and is bolted to the structural base for easy removal at the site.

Legend

S-	Stationary			
CR-	Corrosion-resistant			
LR-	Long range nozzle			
K-	Purple K agent			
C-	With regulator			
D-	Without regulator			
IND-	India			



Ordering Information and Technical Specifications

Part <u>No.</u>	Model Name	Agent / Charge	Finish	Hose / Length	Nozzle	Nominal Flow*	Effective Discharge Time**	Charged Weight	Approximate Nozzle Range
450979	S-CR-LR- K-1000-C-	Purple K 900 lb (408 kg)	Ероху	1 in. x 150 ft (45.7 m)	LR-44	12 lb/sec (5.4 kg/sec)	77 to 85 sec	3500 lb (1588 kg)	45 ft (13.7 m)

 $^{^{*}}$ Flow rate is an average of agent discharge from 2 hose reels mounted on skid and with a $\pm 10\%$ tolerance used by UL.

 $[\]ensuremath{^{**}}$ Effective discharge is a visual determination of gas point and is approximate.

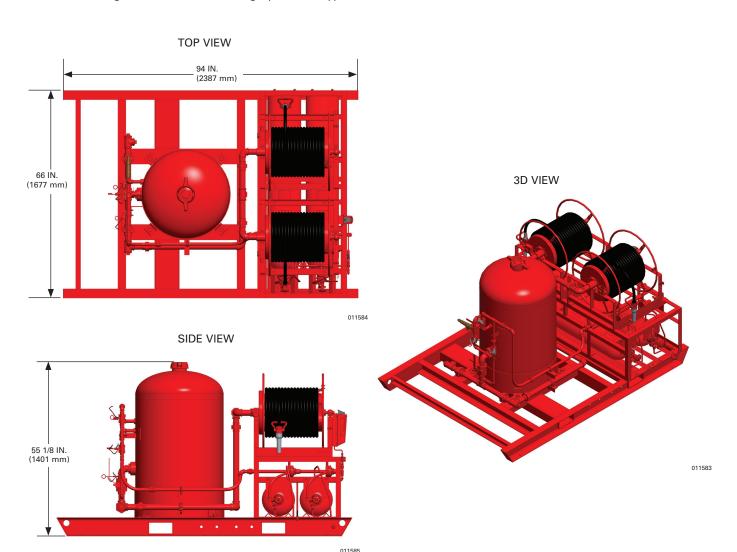


Figure 2: S-CR-LR-K-1000-C-PESO, IND

Ordering Information and Technical Specifications (Continued)

							Effective		Approximate	Э
Part						Nominal	Discharge	Charged	Nozzle	
No.	Model Name	Agent / Charge	Finish	Hose / Length	Nozzle	Flow*	Time**	Weight	Range	
450980	S-CR-LR-	Purple K	Ероху	1 in. x 150 ft	LR-44	9.5 lb/sec	170 to 200	5800 lb	45 ft	
	K-2000-D-	1800 lb (816 kg)		(45.7 m)		(4.3 kg/sec)	sec	(2631 kg)	(13.7 m)	
	PESO IND									

^{*} Flow rate is an average of agent discharge from 2 hose reels mounted on skid and with a ±10% tolerance used by UL.

^{**} Effective discharge is a visual determination of gas point and is approximate.

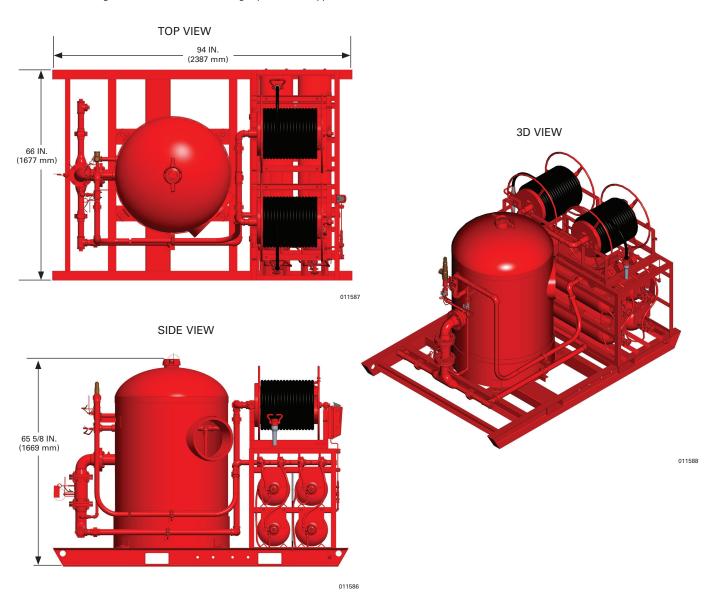


Figure 3: S-CR-LR-K-2000-D-PESO, IND

Purple K Dry Chemical Suppressing Agent

Application

ANSUL® Purple-K dry chemical agent may be used to combat fires in flammable liquids, gases, and greases (Class B) including such fires when involved with energized electrical equipment (Class C). Because of its excellent fire fighting effectiveness, Purple-K agent is widely used in the petroleum industry and in other areas where the fire risk is high.

Description

Purple-K agent is a potassium bicarbonate based dry chemical containing chemical additives. The agent is free-flowing, non-abrasive and will produce no toxic effects. Purple-K agent is purple in color to differentiate it from the other dry chemical agents.

Post-fire cleanup of Purple-K agent can be readily accomplished using a vacuum cleaner or a broom and dust pan.

A CAUTION

Never mix Purple-K with phosphate based dry chemicals. A chemical reaction that is harmful to the stationary container will take place, and may cause failure of the container.

A CAUTION

Dry chemical fire suppressing agents are considered non-toxic, but are classified as a nuisance dust irritant, and may cause temporary irritation to the eyes, skin, or respiration system. Avoid unnecessary exposure.



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Figure 4: Purple-K Dry Chemical suppressing agent

HMIS Information

PURPLE-K dry chemical HMIS 1-0-0/muscovite mica, magnesium Aluminum silicate, potassium bicarbonate/ nuisance dust, irritant. Nitrogen expellant gas HMIS 0-0-0/cold discharge. Contents under high pressure.

Ordering Information

Purple-K dry chemical agent is available in:

Part No.	Description	Color
448763	Pail 50 lb (22.7 kg) UL Split Inspected	Purple
9335	Pail 50 lb (22.7 kg)	Purple
451603	Drum 200 lb (90.7 kg) UL Split Inspected	Purple
25937	Drum 200 lb (90.7 kg)	Purple

Following discharge, this stationary unit is to be refilled only with the original agent, as specified on the nameplate. Refill services are available from your local Authorized ANSUL® Distributor.

Actuation Hoses

Description

The 1/4 in. actuation hose is for the nitrogen cylinder and connects the actuation manifold to the pneumatic actuator that is located on the quick-opening valve.



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Figure 5: Actuation hose

Ordering Information

Part No. Description

11580 Actuation Hose, 18 in. (457 mm)

Expellant Gas Hoses

Description

The expellant gas hose connects the nitrogen cylinder valve to the pressure regulator or directly to the agent container.



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Figure 6: Expellant gas hose

Ordering Information

Part No.	Description	Stationary System
423581	Expellant Hose 18 in. (457 mm)	S-CR-LR-K-1000-C-PESO S-CR-LR-K-2000-D-PESO
423583	Expellant Hose 31 in. (787 mm)	S-CR-LR-K-2000-D-PESO

Nitrogen Cylinders

Description

The cylinders are factory filled with nitrogen at 182.02 bar. Two cylinders are used in 1000 lb skid and four cylinders are used in 2000 lb skid. The nitrogen valve can be operated either manually or pneumatically with the approved valve actuator.

The cylinders are shipped with a maintenance record card and protective shipping cap attached to the threaded neck of the cylinder. This cap entirely encloses and protects the valve while in shipment.



Figure 7: Nitrogen cylinder

Technical Specifications

Component	Material	Thread Size/ Type	and Standards
Cylinder	Steel	3/4-14 NGT, Female	IS:7285 PT2, PESO
Quick- Opening Valve	Brass/Chrome plated	3/4-14 NGT, Male 0.965-14 NGO-RH-INT, Female outlet	UL
Protective Shipping Cap	Steel	3.125-11 NS1, Female	-

Ordering Information

Part		Approximate Gross		
<u>No.</u> _	Description	Weight	Diameter	Height
448306	400 ft ³ Nitrogen Cylinder	286.6 lb (130 kg)	10 1/2 in. (267 mm)	65 5/8 in. (1666.5 mm)

Manual Pneumatic Actuator

Application

The manual pneumatic actuator is designed to provide pneumatic actuation of the ANSUL® LDC system on the skid.

Description

The manual pneumatic actuator is made up of a cartridge receiver, mounting plate, cartridge cover, ring pin and the cartridge itself. The actuator utilizes a nitrogen charge and is pressurized to approximately 2100 psi (145 bar) for the LT-5 cartridge at 70 °F (21 °C). Actuation line connection to the actuator is 1/4 in. (6.35 mm) flare tube.



Figure 8: Manual pneumatic actuator

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Manual Pneumatic Actuator (Continued)



Figure 9: Manual pneumatic actuator front view

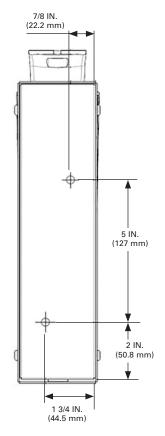


Figure 10: Manual pneumatic actuator back view

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Ordering Information

Part No.	Paint	Description	Shipping Weight
448313	Ероху	Manual Pneumatic Actuator, UL Split Inspected	6 lb (2.7 kg)
32746	Ероху	Manual Pneumatic Actuator	6 lb (2.7 kg)

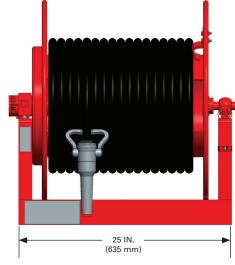
Cartridge Ordering Information

Part No.	Description
448277	LT-5-R Cartridge, UL Split Inspected
6979	LT-5-R Cartridge

Hose Reels

Description

ANSUL® hose reels are designed to send dry chemical from the main system directly to the hazard area. This is accomplished by means of a manual pneumatic actuator (Part No. 448313 - not included) mounted on the hose reel assembly. By pulling the ring pin and pushing the lever on the actuator, the operator can send dry chemical directly to the



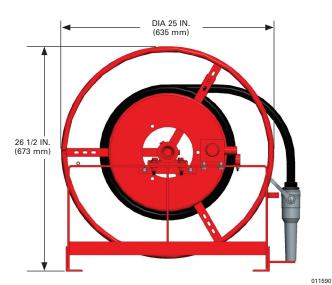
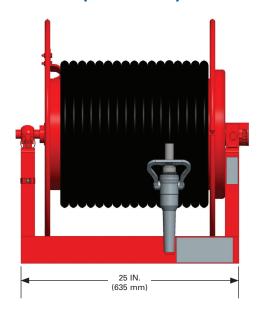


Figure 11: CS hose reel left side

Hose Reels (Continued)



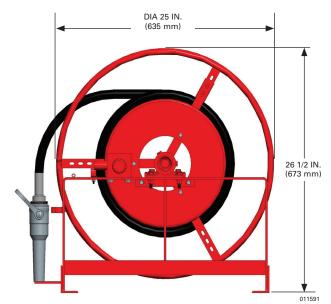


Figure 12: CS hose reel right side

Options

Weather cover will shield hose reel assemblies from rain, sun, snow, and so on. The PVC material is mildew-proof and oil-resistant.

Ordering Information

Part No. 450995 510061*	Description CS Hose Reel, RHS INDIA	Standard Hose 1 in. x 150 ft (45.7 m)	Nozzle LR-44	Approximate Shipping Weight 334 lb (151.5 kg)
451592 510061*	CS Hose Reel, LHS INDIA	1 in. x 150 ft (45.7 m)	LR-44	334 lb (151.5 kg)

Note: * Weather cover part number.

Pressure Regulator

Description

The regulator is factory set to provide a flowing pressure of 205 psi (14.1 bar), allowing the proper nitrogen pressure to discharge the dry chemical from the agent container to the discharge nozzle.

Material: Brass and chrome-plated.

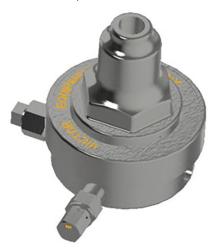


Figure 13: Pressure regulator

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Ordering Information

Part No. Description

448299 Pressure Regulator 205 PSI (14.1 bar), UL Split

Inspected

Note: One regulator per nitrogen cylinder is required.

Agent Container Safety Valve

Description

The safety relief valve protects the agent container from an over-pressurization if a valve is left closed in the system. Only one safety relief valve is required per agent tank.

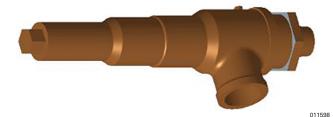


Figure 14: Safety valve

Ordering Information

Part No.	Tank Size	Description
448464	1000 lb	3/4 in. Pressure Relief Valve,
	Agent Tank	Set Pressure 225 psi (15.51 bar)
		Gas Relieving Capacity 544 cfm (15.4 cmm)
448465	2000 lb	1 in. Pressure Relief Valve,
	Agent Tank	Set Pressure 225 psi (15.51 bar)
		Gas Relieving Capacity 1002 cfm (28.4 cmm)

Lifting Bar (Optional)

Description

The lifting bar is a separate component, and is not part of the skid and it must to be ordered separately. A rugged steel lifting bar shall be provided with the skid unit and be bolted to the skid for easy removal at the site. The lifting bar shall be suitable for single-point lifting, eliminating the need for any lifting slings and spreader bars. The lifting point shall be above the skid assembly in line with the unit's center of gravity. The lifting bar is designed to carry a minimum of 1.5 times the design weight of the skid. The lifting bar can be used to lift 1000 lb and 2000 lb Large Dry Chemical Systems.

A CAUTION

The lifting bar is designed to lift the 1000 lb and 2000 lb Large Dry Chemical Systems. This is not inclusive of the dry chemical inside the tank. Use the lifting device only when the unit is empty.

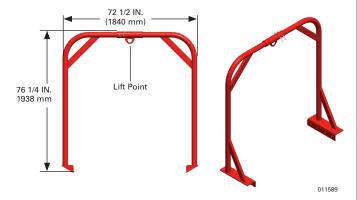


Figure 15: Lifting bar

Ordering Information

Approximate Weight
220 lb (100 kg)

Safety Data Sheets (SDS) are available at www.ansul.com.

Note: The converted metric values in this document are provided for dimensional reference only and do not reflect an actual measurement.

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