

shown:
sdc1000
with turret

DRY CHEMICAL STATIONARY UNITS

**Large Capacity, Hose Line
Fire Fighting Units**

Features

- *Modular design provides units sized to fit every hazard with agent capacities from 500 to 4,000 lbs. and choice of components*
- *Available with BC type (Purple K or sodium bicarbonate) or ABC type (multi-purpose) dry chemicals*
- *Designed for one person operation or can be configured for multiple application points*
- *Offers rapid flame knockdown to minimize spread and damage of fire*
- *Totally self-contained unit includes agent tank, actuator, expellant gas, agent lines, hose storage, and discharge method*
- *Works independent of possible interruptions in municipal electrical and water supplies*
- *Rugged construction – hardened stainless steel moving parts, corrosion-resistant hoses and finishes, and brass fittings available – stands up to the most hostile environments*
- *Costs less and easier to maintain than complicated automatic piped systems*
- *Complies with NFPA 17, critical components meet ASME and DOT codes*

Applications

- Specialty Chemical Manufacturing
- Petroleum Production and Processing
- Underground or Surface Mining
- Shipyard and Marine Operations
- Paint, Plastics and Textile Manufacture
- Flammable Liquid Storage and Loading
- Processes Where Water is Reactive
- Heated Oil in Pressurized Piping Systems
- LNG Transfer and Charging Stations
- Oil-Filled Electrical Equipment

Operation

When the unit is in standby mode, only the nitrogen gas cylinder is under pressure. Upon actuation, nitrogen expellant enters the agent tank through special gas tubes, fluidizing and pressurizing the dry chemical agent in the tank for discharge.

The operator grasps the nozzle, pulling the hose from the hose rack or reel. Once positioned safely to fight the fire, the operator opens the

discharge nozzle fully and directs agent to the fire. Agent is applied until the fire fighting objective is achieved.

After the fire is completely extinguished all agent lines are blown clear. The unit is then recharged with agent and expellant gas, individual components are evaluated to operational guidelines, and the unit is returned to service.

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Description

Components



Agent Tank Assembly

sdc500
sdc1000
sdc2000
sdc4000



Actuation

manual quick open (QO) valve
pneumatic remote actuator
electric valve actuator



Expellant Nitrogen Assembly

300 cu. ft.
400 cu. ft.

Component Availability by Model

(Availability subject to change without notice. Call Fire Combat for custom unit design.)

Model Number	Nominal Capacity	Agent Tank Assy. Capacity	Actuation Options	Expellant Nitrogen Assy	Agent Line Options
sdc500	500 lbs.	500 lbs. Purple K 555 lbs. BC 525 lbs. ABC	manual QO	1 – 300 cu. ft.	1 – 50 ft. hose 1 – 100 ft. hose
sdc1000	1000 lbs.	1000 lbs. Purple K 1110 lbs. BC 1050 lbs. ABC	manual QO pneumatic	2 – 300 cu. ft.	1 – or 2 – 50 ft. hose 1 – or 2 – 100 ft. hose
sdc2000	2000 lbs.	2000 lbs. Purple K 2220 lbs. BC 2100 lbs. ABC	manual QO pneumatic electric	4 – 400 cu. ft.	1 –, 2 –, 3 – or 4 – 100 ft. hose 1 –, 2 –, 3 – or 4 – 125 ft. hose fixed piping manifold for remote reels, hose racks
sdc4000	4000 lbs.	4000 lbs. Purple K 4440 lbs. BC 4200 lbs. ABC	manual QO pneumatic electric	8 – 400 cu. ft.	1 –, 2 –, 4 – or 6 – 100 ft. hose 1 –, 2 –, 4 – or 6 – 125 ft. hose fixed piping manifold for remote reels, hose racks

* "Discharge Time" equals "Nominal Capacity" of agent tank divided by flow rate using one operator.

** For full shipping weight, add weight of dry chemical needed to fill unit (see "Agent Tank Assy. Capacity" column).

Typical Coverage Area

Your choice of unit specifications should follow a thorough hazard analysis. At a minimum, this includes a full definition of your:

- 1. fire hazard** – the type of fuel, potential hazard size, and burning configuration factors like fuel pressure, obstacles, 3-D fires, etc.;
- 2. the protection objective** – the importance of code compliance, extinguishment vs. controlling fire spread, and your escape/rescue mission;
- 3. agent choice, discharge time and flow rate** – match agent with fire class, and define necessary agent discharge characteristics;
- 4. unit capacity and components required** – allow a minimum 30 second agent discharge per application point (longer if possible), and address manpower/environmental considerations;
- 5. training and ongoing support needed** – conduct a full assessment of fire fighter skills, and acquire maintenance/recharge supplies.

Large hand hose line units are not assigned UL® fire ratings. The typical coverage area presented at right is for illustration purposes only. Consult a fire protection professional before finalizing your fire protection plans.

Notes:

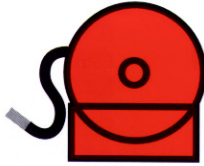
- Coverage representations are based on agent application by trained operators.
- Large fires will require multiple operators with overlapping coverages.
- The presence of obstacles in a fire may require at least two simultaneous operators.
- Maximum coverage and nozzle range depends on factors like obstacles, wind conditions, and agent type, among others.

Large Capacity, Hose Line Fire Fighting Units



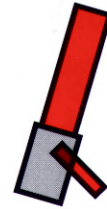
Agent Line

50 ft. x 1.0 in. dia. hand hose line
100 ft. x 1.0 in. dia. hand hose line
125 ft. x 1.0 in. dia. hand hose line
fixed distribution piping manifold



Hose Storage

hose rack
manual rewind hose reel
electric rewind hose reel



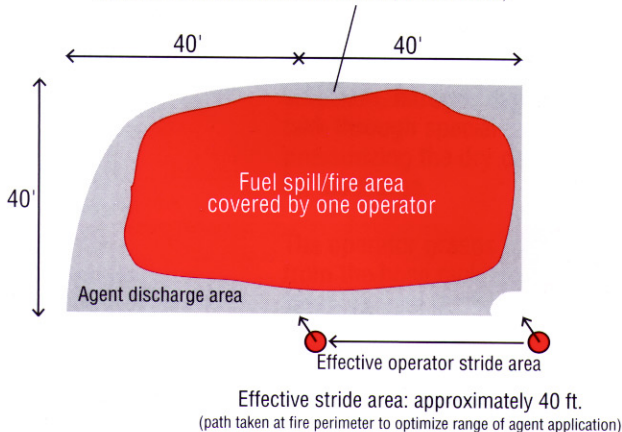
Discharge Method

standard nozzle
Maxflow nozzle
pistol grip
manual turret

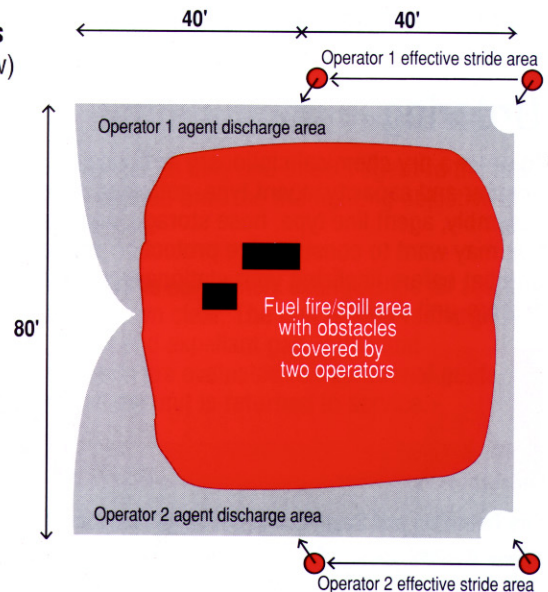
Hose Storage Options	Discharge Method Options	Flow Rate	Discharge Time*	Ship Wt. (Empty)**	Dimensions (H x W x D)
1 – hose rack 1 – manual reel	standard nozzle Maxflow nozzle pistol grip	4.5 lb./sec. 8.0 lb./sec. 6.0 lb./sec.	111 sec. 63 sec. 83 sec.	950 lbs.	57 in. X 68 in. X 36 in.
1 – or 2 – hose racks 1 – or 2 – manual reels 1 – or 2 – electric reels	standard nozzle Maxflow nozzle pistol grip	4.5 lb./sec. 8.0 lb./sec. 6.0 lb./sec.	222 sec. 125 sec. 167 sec.	1500 lbs.	70 in. x 85 in. x 32 in.
1 –, 2 –, 3 – or 4 – remote hose racks 1 –, 2 –, 3 – or 4 – electric reels 1 –, 2 –, 3 – or 4 – manual reels	standard nozzle Maxflow nozzle pistol grip manual turret	4.5 lb./sec. 8.0 lb./sec. 6.0 lb./sec. (engineered for particular hazard)	444 sec. 250 sec. 333 sec.	2300 lbs.	66 in. x 95 in. x 48 in.
1 –, 2 –, 4 – or 6 – remote hose racks 1 –, 2 –, 4 – or 6 – electric reels 1 –, 2 –, 4 – or 6 – manual reels	standard nozzle Maxflow nozzle pistol grip manual turret	4.5 lb./sec. 8.0 lb./sec. 6.0 lb./sec. (engineered for particular hazard)	889 sec. 500 sec. 676 sec.	6500 lbs.	67 in. x 140 in. x 54 in.

One Operator (overhead view)

Surface area coverage: approximately 1800 sq. ft.
(single trained operator applying 500 lb. of Purple K at 8 lb./sec.)



Two Operators (overhead view)



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Specifications

Specifications Available as ASCII Text File (0401-DSS.TXT)
Call: 1-800-866-4779

Agent Tank Assembly. The tank shall be welded steel construction built to the latest ASME Unfired Pressure Vessel Code. It shall be designed for a working pressure of 250 psi and identified by manufacturer data plate and serial number.

The tank shall include gas tube(s) arranged to fluidize the dry chemical and pressurize the tank upon actuation. Gas tube(s) shall include a rubber check valve to prevent agent from backing up into the expellant gas supply. The tank shall include an agent pickup tube and outlet sized to the discharge requirements of the unit. A 4 in. I. D. agent fill opening with a nickel-plated threaded collar shall be provided.

Tank Fill Cap. Agent tank(s) shall be provided with a cast aluminum fill cap, hardlube anodized, black dyed and Teflon® coated. Each fill cap includes two integral handles for easy hand tightening and removal. Fill caps are equipped with rubber gaskets, an optional visual pressure indicator and safety vent holes to vent pressure while engaging at least 3-1/2 threads.

Tank Pressure Relief Valve. Agent tank(s) shall be provided with a pressure relief valve to prevent the tank from exceeding pressures 10% above maximum working pressure.

Actuation. Unit actuation shall incorporate an UL® listed quick opening (QO) nitrogen cylinder valve capable of:

1. manual actuation by QO lever or handwheel action
2. remote actuation using optional pneumatic actuator(s)
3. remote actuation using optional electric actuator(s)

Actuation method(s) employed shall be independent and not obstruct one another.

Each QO valve shall be constructed of chrome-plated brass with hardened stainless steel moving parts in areas subject to wear. The valve shall be fitted with an integral pressure gauge and safety relief device. Valve outlets and connections shall conform to CGA 580 standards for nitrogen service.

Expellant Nitrogen Assembly. Unit agent shall be expelled by gas pressure from nitrogen gas cylinder(s) conforming to the requirements of DOT 3AA. Cylinder size and quantity shall provide for both agent discharge and unit purge requirements.

Pressure regulator(s) shall be provided to reduce nitrogen cylinder pressure to unit working pressure. Regulator output shall be adjusted and sealed to discourage field manipulation, and a full flow relief valve shall be provided.

Agent Lines. Agent hand hose line shall be UL® 92 extinguisher booster hose fitted with reusable couplings and sized to the discharge requirements of the unit.

Agent Tank Purge and Blowdown. Low pressure agent tank piping for system purge and blowdown shall be brass or other suitable material. Dissimilar metals shall be protected against electrolytic corrosion. Low pressure hoses shall have a burst pressure of not less than four times the maximum working pressure of the unit.

Hose Storage. Hose racks shall be of steel construction suitable to carry the selected length and weight of hose. Manual and electric hose reels shall incorporate a friction brake and horizontal roller guides. Discharge nozzle holders shall be provided.

Discharge. All agent discharge nozzles shall be constructed of brass, bronze or hardlube anodized aluminum and be equipped with on/off bail type handles capable of leak free sealing at unit operating pressure. Optional pistol grip nozzle handles shall be designed with finger grooves for operator gripping.

Finish. Painted surfaces shall be cleaned and primed with an alkyd-phenolic rust inhibiting primer and receive a top coat of red automotive grade polyurethane paint. All hoses, instruction plates and control markings shall not be painted.

Skid. Optional skids shall be low profile welded steel construction with lifting provisions and arranged so system components can be bolted in place. Finish shall be the same as that used with unit.

Operation Instructions. Control markings, and operating and precautionary instructions shall be permanently affixed near the appropriate controls for operator use.

Ordering

To order a dry chemical stationary unit, specify the unit model number and capacity, agent type, actuation mode, expellant assembly, agent line type, hose storage, and discharge method. You may want to consult a fire protection professional at Fire Combat before finalizing your stationary unit purchase or for custom-unit design.

Call: 1-800-866-4779

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