STATIONARY DRY CHEMICAL SYSTEM AG-SIDP-BHR-xxxx

Large manual extinguishing system with hose reel / 120 to 3500 kg

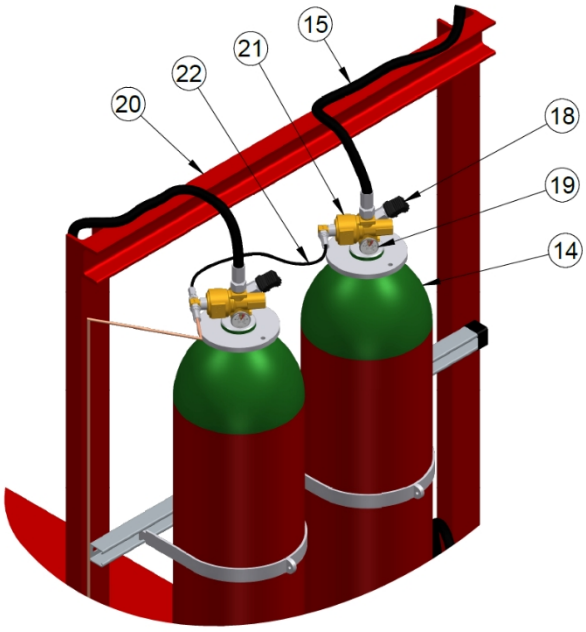
Data sheet 13302 Rev.00

Product description

Stationary dry chemical powder systems with manual hose reels are used for the suppression of special hazards fires that require significant quantities of this extinguishing agent, such as offshore platforms, petrochemical facilities, fuel and LPG storage areas, as well as loading stations and heavy manufacturing operations. These systems are suitable for Class A hazards (solid combustible materials), Class B hazards (flammable liquids and gases), and Class C hazards (energized electrical equipment).

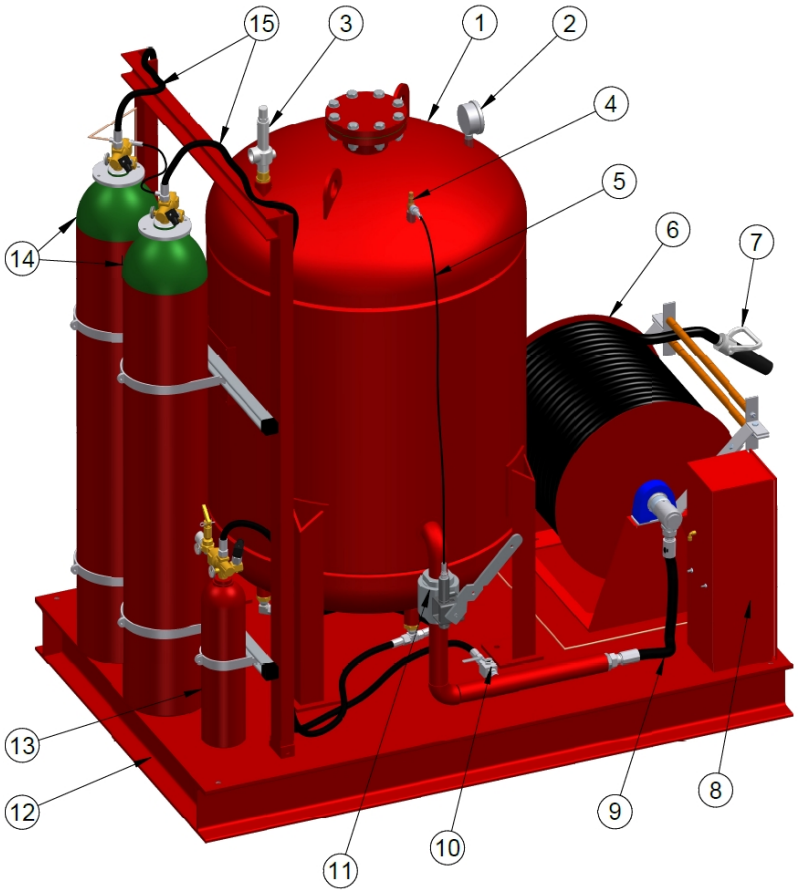
The system consists of a tank model SIDP-BHR-xxxx filled with dry chemical powder, connected to a maximum of four hoses to be operated by trained personnel who manually direct and distribute the extinguishing agent onto the hazard. The powder tank is pressurized by means of attached cylinders containing the expellant agent (N_2), normally at 200 or 300 bar, with an RGS-MAM-RD11 pressure regulating valve.

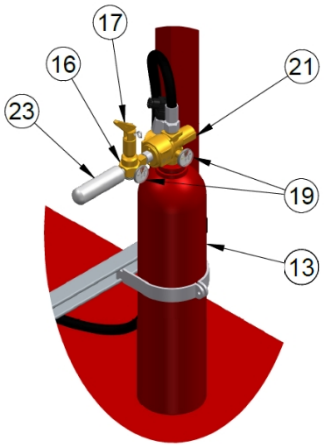
Once activated, the dry chemical tank is pressurized and, once the nominal operating pressure (15 bar) is reached, the dry chemical control valve (SVDNxxxxSH) opens and releases the chemical agent through the hose(s).



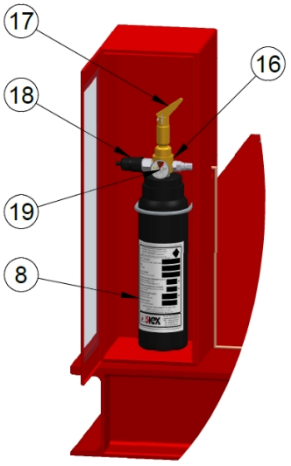
expellant assembly

System components





cleaning kit (optional)



activation pilot cartridge

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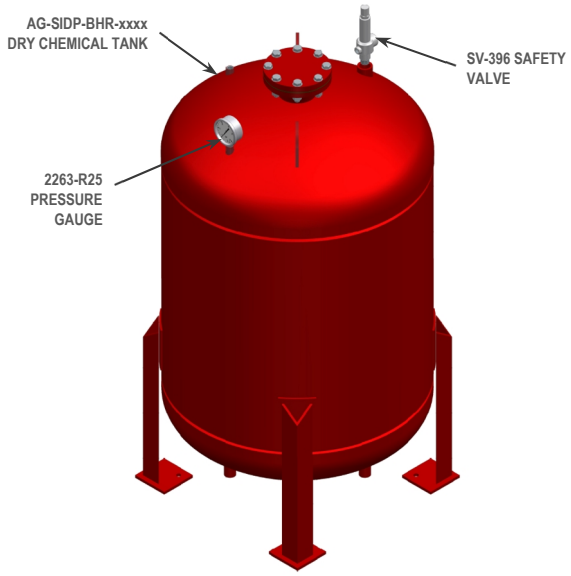
Nº	Description	Type	Qty
1	Tank	AG-SIDP-BHR-xxxx	1
2	Tank pressure gauge	2263-R25	1
3	Safety valve	SV-396-15, SV-396-20, SV-396-25, SV-396-32	1
4	Pilot valve	FTSV-6	1
5	Activation flexible hose ¼”	DH10, DH10I, DH11, DH11I	1
6	Hose reel	SID25xxxx	≥1
7	Hand hose nozzle	SIL6-LR, SIL6-MR, SIL6-HR, SIL7-LR, SIL7-MR, SIL7-HR	≥1
8	Pilot cartridge in cabinet	100M008UFxx, 00M018UFxx, 100M1UFxx, 00M2UFxx	1
9	Discharge hose	FH-15CO, DH15, DH15I, DH16, DH16I, DH20, DH20I, DH21, DH21I, FH-20HC, FH-25HC	≥1
10	Shut-off valve for cleaning system (optional)	SVA15SH	1
11	Automatic dry chemical control valve	SVDNxxxxSH, SVDNxxxx	1
	Manual dry chemical control valve	SVAxxxSH, SVAxxx	
12	Tank and hose reel support	SKID	1
13	Cleaning cylinder N_2 (100 bar) (optional)	101M6UFxx	1
14	Expellant cylinder N_2 (200 o 300 bar)	101M40UFxx, 101M67UFxx, 101M80UFxx, 101M140UFxx	≥1
15	Impulsion hose	DH15, DH15CO, DH15I, DH16, DH16I	≥1
16	Pilot cartridge valve	RGS-MAM-03	≥1
17	Manual actuator	227DMR, 227DMS, 227CMCC, 227CMC, 227CN, 227CNM	≥1
	Electrical actuator (optional)	227SOLR, 227SOLCR, 227SOLCR125	
18	Pressure switch (optional)	POPRENA150, PROPENC150, APRESA150, APRESC150, POPRENA200, PROPENC200, APRESA200, APRESC200, POPRENA300, PROPENC300, APRESA300, APRESC300	-
	ATEX pressure switch (optional)	POPRECO-AD PSP	
19	Pressure gauge	5140-W250, 5140-W400, UF40I-P150, UF40I-P200, UF40I-P300	≥2
	Pressure gauge with electrical contacts (optional)	5140-E250SP144, 5140-E250SP180, 5140-E400SP270, UF40I-E150, UF40I-E200, UF40I-E300	
20	UPN cylinder support		1
21	Expellant cylinder valve	RGS-MAM-RD11	≥1
22	Flexible hose ¼”	DH10, DH10I, DH11, DH11I	-
23	Pilot cartridge	100M008UFxx, 00M018UFxx	1

AG-SIDP-BHR-xxxx dry chemical tank

The extinguishing agent storage tank consists of a welded carbon steel pressure vessel designed in accordance with ASME Section VIII or UNE-EN 13445-4 for a working pressure of 217 psi (15 bar). It is factory-filled with the appropriate extinguishing agent and equipped with an internal shiphon tube, a safety relief valve model SV-396 that prevents the internal pressure from exceeding the maximum working pressure by more than 10%, as well as a pressure gauge to check the pressure during pressurization.

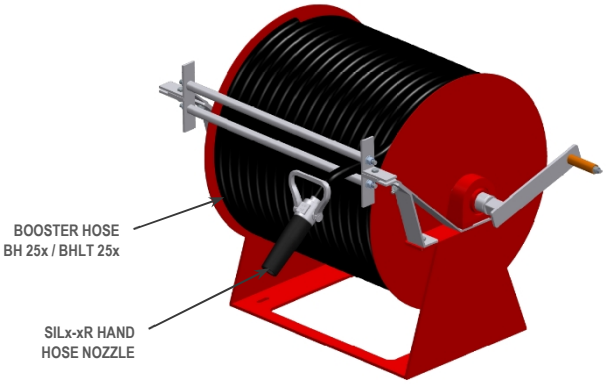
The tank is fitted with lower inlet connections for pressurization with the expellant gas, allowing the dry chemical powder to be fluidized and maintaining constant pressure throughout the discharge. It also features a 3” upper filling connection and a 2" or 4” lower connection for emptying, depending on the model.

The tank is surface-protected against corrosion by Sa 2½ abrasive blast cleaning followed by the application of a primer and an aliphatic polyurethane topcoat. As an option, a zinc-rich coating system is available for C5 corrosivity environments in accordance with ISO 12944:2018.



SID25xxxx hose reel

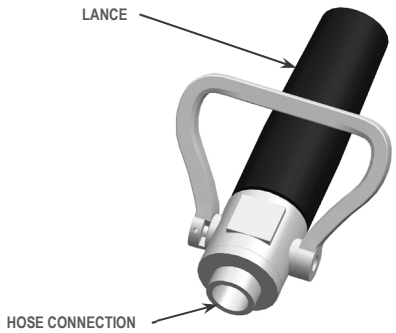
The hose reel is used in stationary dry chemical powder systems. It is designed to accommodate the entire hose in both available lengths. The hose reel is mounted on a metal frame that supports its weight and is suspended on bearings to allow the hose to be smoothly unwound along its full length. The frame is installed on an elevated sliding metal base (skid) to facilitate access. In addition, the reel is equipped with a locking device that prevents movement of the flexible hose during skid transportation. The non-collapsible BH 25x / BHLT 25x hose is connected at one end to the reel and at the other end to the nozzle, allowing the flow of the extinguishing agent and ensuring safe operation at pressures up to 250 psi (17 bar).



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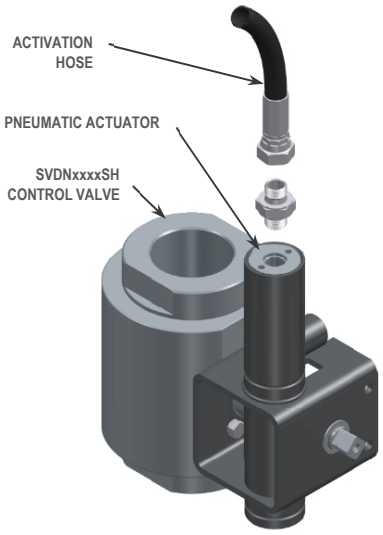
SILx-xR hand hose nozzle

The discharge nozzle consists of a lance, lever, and hose connection assembly. The lever has two positions: open and closed. When actuated, it rotates a spherical plug located inside the valve, allowing the dry chemical powder flow to be shut off or discharged in a straight line through the plug and lance. The powder stream is generated as the dry chemical powder passes through the lance chamber, which is provided with multiple outlet orifices arranged to produce individual streams that combine to form a high-density, medium-range dry chemical powder jet. The SILx-LR model has a discharge range of 6 to 7 meters, the SILx-MR model has a discharge range of 8 to 10 meters, while the SILx-HR model achieves a discharge range of 11 to 12 meters.



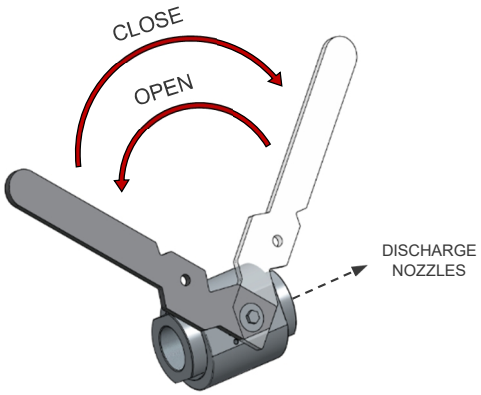
SVDNxxxxxSH automatic control valve

The SVDNxxxxxSH dry chemical control valve releases the dry chemical agent from the tank once the operating pressure reaches 15 bar. The actuation system includes an FTSV-6 pilot valve, installed on the agent tank, and connected to the control valve actuator by means of an actuation hose. During the final stage of pressurization, the pilot valve transmits pressure to the actuator, which automatically opens the valve, allowing the dry chemical agent to flow into the discharge piping and be distributed to the hose.



SVAxxxSH manual control valve

This valve allows the tank to be discharged manually and is used as an alternative to the SVDNxxxxxSH automatic control valve. It is installed between the tank outlet and the discharge piping and remains in the normally closed position. The valve is actuated by turning the handle counterclockwise.



Activation pilot cartridge

Its function is to pneumatically actuate the valves of the expellant cylinders. The cartridge incorporates an RGS-MAM-03 valve, which can be actuated electrically, manually, or mechanically to allow N_2 to flow from the pilot cartridge to the RGS-MAM-RD11 valves installed on the expellant cylinders.

Expellant assembly

The assembly consists of one or more cylinders containing nitrogen (N_2), whose function is to pressurize the dry chemical tank. These cylinders are pneumatically actuated via the pilot cartridge and discharge the nitrogen through flexible hoses to the lower inlet connections of the tank, allowing the dry chemical to be fluidized and maintaining constant pressure throughout the discharge.

The expellant cylinders are equipped with an RGS-MAM-RD11 valve, which functions as a pressure regulator (pressure-reducing valve). Although the cylinder is always charged to 2900 or 4350 psi (200 or 300 bar), the outlet pressure depends on the pneumatic actuation pressure applied to the valve. In other words, if no pressure is present at the valve actuation port, the valve remains closed. When an actuation pressure of 261 psi (18 bar) is applied, the regulated outlet pressure is 261 psi (18 bar).

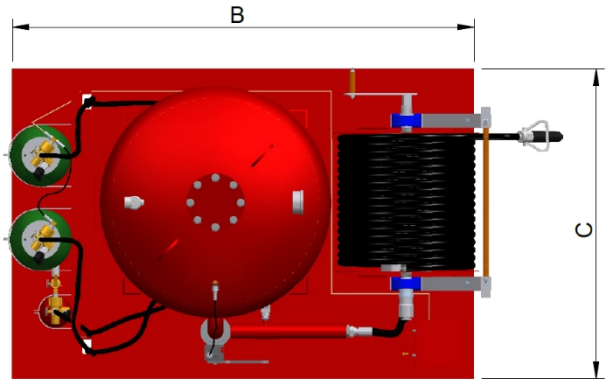
Cleaning cylinder (optional)

The cleaning cylinders are designed to expel the remaining dry chemical agent from the discharge lines, ensuring complete system cleaning and keeping it ready for future activations. The cleaning cylinder is always pressurized to 2900 or 4350 psi (200 or 300 bar) and is installed together with an RGS-MAM-RD11 pressure regulating valve.

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Technical data





DRY CHEMICAL STATIONARY SYSTEMS							
Model	Dry chemical maximum filling lbs (kg)	Dimensions (tolerances ±1%) inch (mm)			Number and size of expellant cylinders	Number of hose reels and hose length	Type of dry chemical
		A	B	C			
AG-SIDP-BHR-120	265 (120)	80.8 (2052,9)	54.2 (1377)	49.2 (1250)	1 cylinder (40L) at 200 bar	1 hose reel 105 or 151 ft (32 or 46 m)	ABC BC KBC D
AG-SIDP-BHR-250	551 (250)	80.8 (2052,9)	54.2 (1377)	49.2 (1250)	1 cylinder (80L) at 200 bar		
AG-SIDP-BHR-300	661 (300)	85.1 (2160,3)	59.1 (1502)	55.1 (1400)	2 cylinders (80L) at 200 bar 1 cylinder (80L) at 300 bar 1 cylinder (140L) at 200 bar 1 cylinder (140L) at 300 bar	1 or 2 hose reels 105 or 151 ft (32 or 46 m)	
AG-SIDP-BHR-500	1102 (500)	85.1 (2160,3)	59.1 (1502)	55.1 (1400)			
AG-SIDP-BHR-750	1653 (750)	84.1 (2136)	81.6 (2072)	52.8 (1340)	2 cylinders (80L) at 300 bar 2 cylinders (140L) at 200 bar 1 cylinder (140L) at 300 bar	1 to 4 hose reels 105 or 151 ft (32 or 46 m)	
AG-SIDP-BHR-800	1764 (800)	84.1 (2136)	81.6 (2072)	52.8 (1340)			
AG-SIDP-BHR-1000	2205 (1000)	84.1 (2136)	81.6 (2072)	52.8 (1340)			
AG-SIDP-BHR-1500	3307 (1500)	97.2 (2468,5)	93.4 (2372)	60.6 (1540)	3 cylinders (80L) at 300 bar 3 cylinders (140L) at 200 bar 2 cylinders (140L) at 300 bar		
AG-SIDP-BHR-2000	4409 (2000)	116.5 (2958,5)	93.4 (2372)	60.6 (1540)			
AG-SIDP-BHR-2500	5512 (2500)	114.2 (2899,8)	59.5 (1512)	66.1 (1680)			
AG-SIDP-BHR-3000	6614 (3000)	127.8 (3244,8)	59.5 (1512)	67.4 (1712)	4 cylinders (80L) at 200 bar 3 cylinders (80L) at 300 bar 4 cylinders (140L) at 200 bar 3 cylinders (140L) at 300 bar		
AG-SIDP-BHR-3500	7716 (3500)	140.5 (3567,8)	59.5 (1512)	67.4 (1712)			

WARNING: This type of system is manufactured and approved for use in stationary dry chemical extinguishing installations. These products are not designed for any other use or purpose. If the product user has any questions regarding the application or use of the product, please contact +34 947 28 11 08. Any unauthorized use or application and/or any other unauthorized modification of the product or its function may cause serious accidents and/or personal injury. AG Fire is not responsible for any unauthorized use of the application.

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