SYSTEM AG-TINDTC-68-ABC / AG-TINDLC-72-xBC

Pre-engineered fixed, automatic and self-contained detection and dry chemical extinguishing system (RG TRACE™-ADAS) for piping networks / 68 to 72 kg / Attached pressure / Total flooding and local application

Data sheet 13220 Rev.00

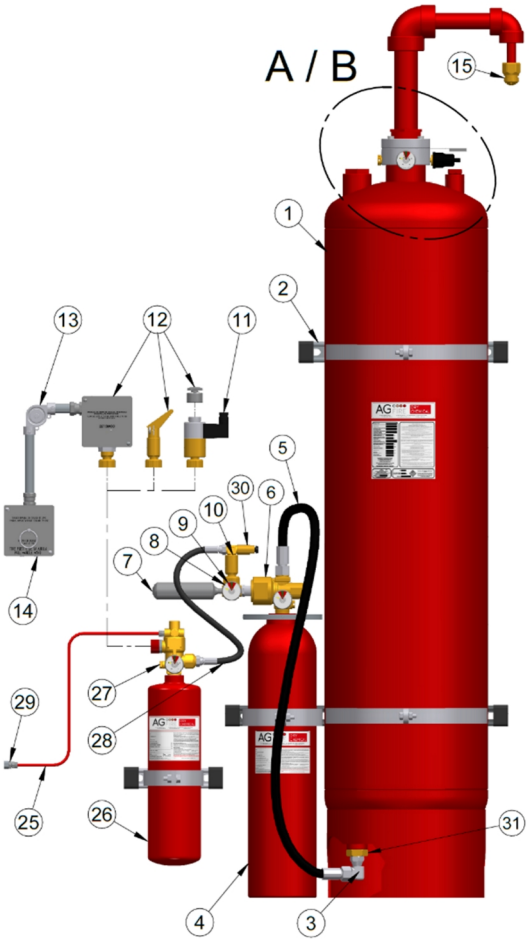
Product description

The AG-TINDTC-68-ABC and AG-TINDLC-72-xBC dry chemical systems with attached pressure are pre-engineered, fixed, automatic and self-contained detection and extinguishing systems (RG TRACE™-ADAS), which operate with a predefined piping network and a fixed quantity of agent — in this case, between 68 and 72 kg of extinguishing agent.

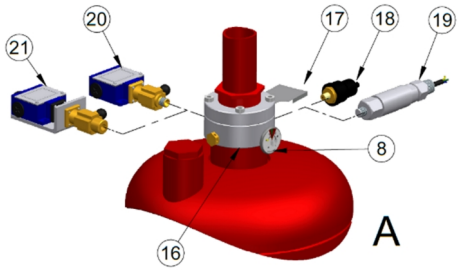
Dry chemical systems are suitable for the protection of Class A hazards (combustible solid materials), Class B hazards (flammable liquids and gases), and Class C hazards (energized electrical equipment).

The system consists of a cylinder filled with dry chemical powder connected to a piping network that distributes the agent to either total flooding or local application nozzles. The dry chemical cylinder is pressurized by an attached bottle that contains the expellant agent (N_2), typically at 150 bar with a pressure regulator RGS-MAM-RD11 valve. Additionally, the system includes a pressurized detection cylinder with N_2, connected to the RG TRACE™-NT heat detection tubing, which is installed along the area to be protected in order to detect a fire and automatically activate the system. Additionally, it features manual and electrical activation methods (optional). Once activated, the dry chemical cylinder is pressurized, and when the specified operation pressure (25 bar) is reached, the chemical agent is released and distributed over the protected area through the nozzles. The discharge of the dry chemical cylinder can operate with either a rupture disc (SIDR40) or a dry chemical control valve (SVDNxx40SH).

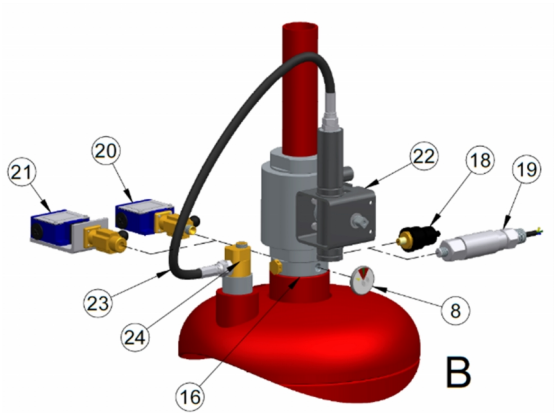
System components



System with SIDR40 rupture disc



System with SVDNxx40SH dry chemical control valve



Applications

Pre-engineered dry chemical cylinders are designed for a wide range of industrial applications, including paint booths and preparation areas, coating and finishing operations, machinery and equipment areas, boiler rooms, furnaces, and electrical and mechanical rooms, as well as facilities for the storage of flammable liquids, hazardous materials, and bulk products, spill containment dikes, and quench and dip tanks.

Technical data

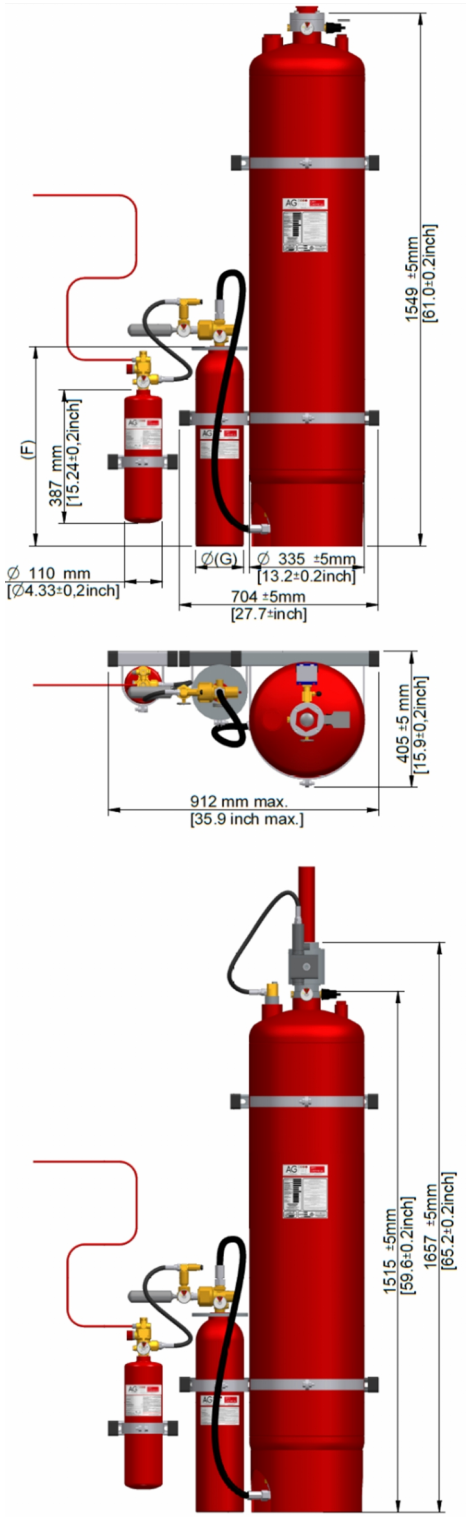
DRY CHEMICAL CYLINDER WITH ATTACHED PRESSURE AND DETECTION CYLINDER				
Model type	**Dry chemical filling lbs (kg)**	**Risk type**	**Dry chemical type**	**Number of nozzles**
INDTC-68-ABC AG-103MxADAS	149.9 (68)	Total Flooding	ABC	8
INDLC-72-ABC AG-103MxADAS	158.7 (72)	Local Application	ABC	12
INDLC-72-BC AG-103MxADAS	158.7 (72)	Local Application	BC	12

NOTE: Class D and potassium bicarbonate Class BC dry chemical systems are also available. Contact AG Fire.

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Nº	Description	Type	Qty
1	Cylinder	INDTC-72-ABC, INDLC-68-ABC, INDLC-68-BC	1
2	Fixing Brackets	POHCxxx	1
3	Elbow adapter	541CO21, 541CO20	1
4	N_2 expellant cylinder	101M40UFxx, 101M67UFxx	1
5	Impulsion hose	DH15, DH15CO, DH15I, DH16, DH16I	1
6	Expellant cylinder valve	RGS-MAM-RD11	1
7	N_2 Pilot cartridge	100M008UFxx, 100M018UFxx	1
8	Pressure Gauge	5140-W40, 5140-W60, 5140-W250, UF40I-P24, UF40I-P150, UF40I-P200	2
	Pressure Gauge with electrical contacts (optional)	5140-E40SP13, 5140-E60SP22, 5140-E250SP144, 5140-E250SP180, UF40I-E24, UF40I-E150, UF40I-E200	
9	Cartridge valve	RGS-MAM-03	1
10	Pneumatic actuator	227CN, 227CNTK, 227CNM	1
11	Electrical actuator (optional)	227SOLR, 227SOLCR, 227SOLCR125	1
12	Manual actuator	227DMR, 227DMS, 227CMCC, 227CMC, 227CN, 227CNM	
13	Pulley elbow	TK-CPx	-
14	Remote manual pull station	TK-DMS, TK-DMS2	-
15	Nozzle	AG-TF-1, AG-O-2, AG-TK-1	8 or 12
16	Tank valve	DCHD50, DCHDN50	1
17	Bursting disc	SIDR40	1
18	Pressure switch (optional)	POPRENA50, POPRENC50, APRESA50, APRESC50	1
19	ATEX pressure switch (optional)	Popreco-AD413	
20	Pressure switch (optional)	POINPRExx	1
21	ATEX pressure switch (optional)	POINPREAD-ATEXxx	
22	Dry chemical control valve	SVDNxx40SH	1
23	Activation flexible hose ¼"	FH-6PO, FH-7PO, DH10, DH10I, DH11, DH11I	1
24	Pilot valve	FTSV-6	1
25	Heat detection tubing	RG TRACE™-NT	1
26	RG TRACE™-ADAS Detection cylinder	AG-103M1ADAS, AG-103M3ADAS	1
27	Detection cylinder valve	RGS-MAM-12-FD1	1
28	Activation flexible hose ¼"	DH10, DH10I, DH11, DH11I	1
29	End of line	ST-FL1-Ø6, ST-FL3-Ø3, ST-FL3-10, ST-FL4-10	1
	Closure cap	ST-FC1-Ø6, ST-FC2- Ø6	
30	Bleed valve	POVV8	1
31	Check valve	VALAN-12P	1

Dimensions

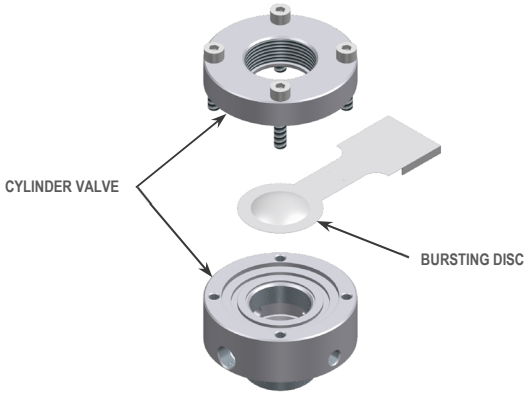


DIMENSIONS OF N_2 EXPELLANT PILOT CYLINDER		
Cylinder capacity	101M40UFxx	101M67UFxx
	1.41 ft^3 (40L)	2.38 ft^3 (67,5L)
N_2 Pressure	150 bar	166 bar
(F) Inch (mm)	48.8 ±0.39 (1240 ±10)	57.9 ±0.39 (1470 ±10)
(ØG) Inch (mm)	Ø9.0 ±0.08 (Ø229 ±2)	Ø10.5 ±0.08 (Ø267 ±2)

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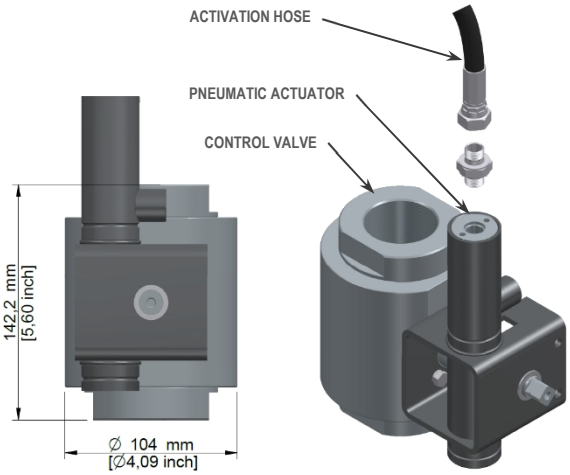
SIDR40 bursting disc

This bursting disc allows the dry chemical cylinder to be discharged once a pressure of 25 bar is reached. The disc is installed at the outlet of the cylinder, between the cylinder valve and its cap. When the required pressure is reached, the disc bursts and the extinguishing agent flows into the discharge pipe, from where it is distributed to the nozzles.



SVDNxx40SH dry chemical control valve

The SVDNxx40SH control valve releases the dry chemical from the cylinder once a pressure of 25 bar is reached. The actuator of the control valve is connected to the dry chemical cylinder via the activation hose. When the required pressure is reached, the actuator opens the valve, allowing the extinguishing agent to flow into the discharge pipe and be distributed to the nozzles.



RG TRACE ™-NT heat detection tubing

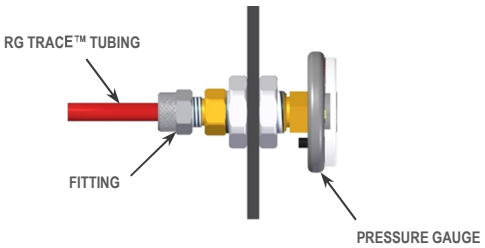
The RG TRACE™ tubing is a heat-sensitive tube designed to rupture at a predetermined temperature.

The pressurized tube is installed along the hazard area and ruptures when a temperature increase caused by a fire occurs. Depressurization of the tube activates the cylinder valve, allowing the extinguishing agent to be discharged through the nozzles.



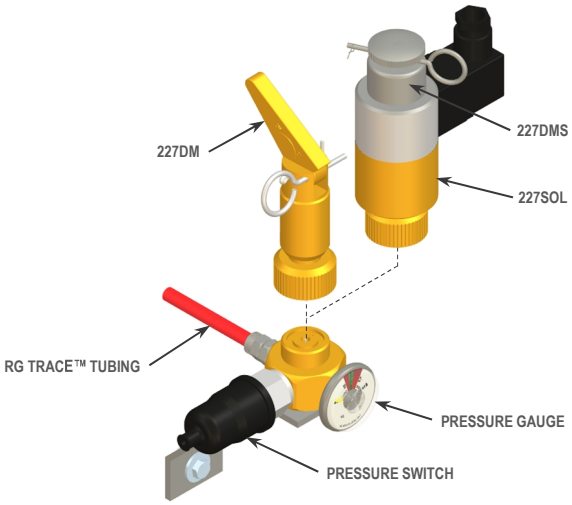
ST-FLx-xx end of line

The ends of line are installed at the end of the RG TRACE™trace tubing and are used to monitor its pressure by visual indication (pressure gauges), visual indication with pressure drop alarm signal (pressure gauges with electrical contacts) or monitor pressure drop warning (pressure switch).



ST-FL1-Ø6 end of line with actuator

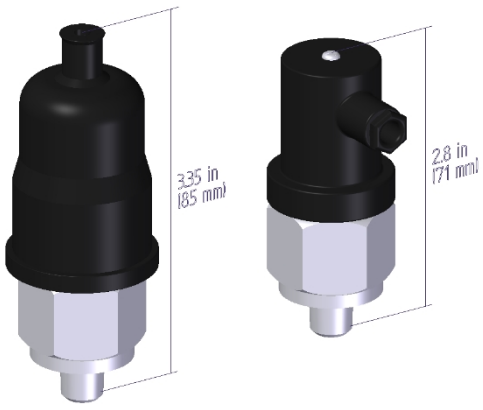
Besides pressure monitoring, the ST-FL1-Ø6 end of line enables the installation of actuators to activate the system either manually or electrically.



Pressure switch (optional)

The pressure switch is a monitoring device that sends an electrical signal to the fire control panel when the pressure in the cylinder drops.

It is factory-supplied preassembled on the cylinder valve, in the corresponding port. Inside the device, there is a dry contact that opens or closes an electrical circuit depending on the pressure condition. There are two variants available: NC (normally closed, opens under pressure) and NO (normally open, closes under pressure).



POPRENxxx APRESxxx

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Electrical activation (optional)

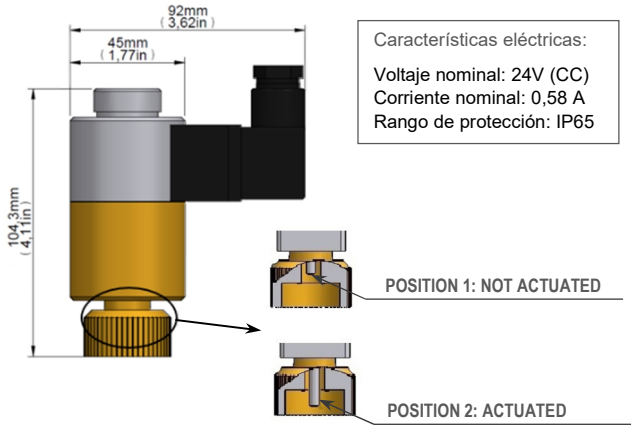
227SOL resettable electric actuator head (24VDC)

The purpose of this actuator is to electromagnetically actuate the container valves where it is installed. It is activated when the coil is energized, causing the solenoid to operate and actuate the valve.

This actuator is resettable — the pin returns to the standby position by threading a reset screw into its revolving nut.

The mechanism used to connect it to the container valve includes a revolving nut, allowing it to be properly oriented in the desired direction.

If installation conditions require special protection, please contact AG-IND to inquire about the availability of appropriately rated enclosures.

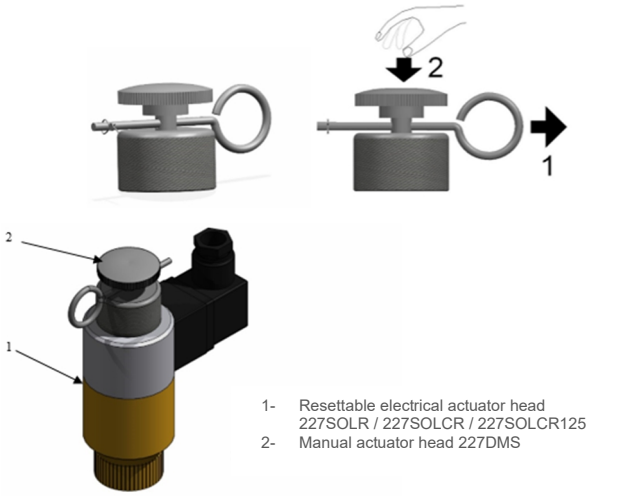


Manual activation

227DMS manual actuator head

This actuator allows manual activation of the container valves where it is installed. Once the safety pin is removed from the actuator, the push button can be pressed to activate the container valve and initiate discharge.

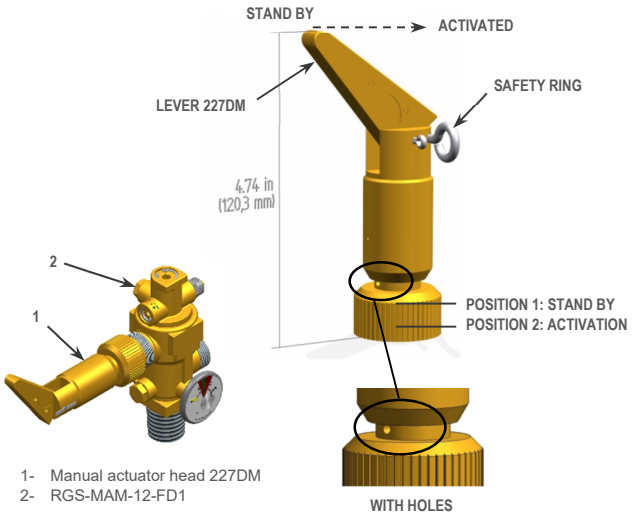
The 227DMS is connected ONLY to the upper actuation port of the 227SOLR, 227SOLCR and 227SOLCR125 electric actuators, by means of a revolving nut that allows its proper orientation.



227DM manual actuator head

The function of this actuator is to manually activate the container valves where it is installed. Once the safety ring is removed from the actuator, the manual lever can be turned in the opposite direction.

The 227DM manual actuator can be installed on the side actuation port of the RGS-MAM-12-FD1 valve, or mounted on top of the electric actuator installed on that valve, using a revolving nut that allows proper orientation.

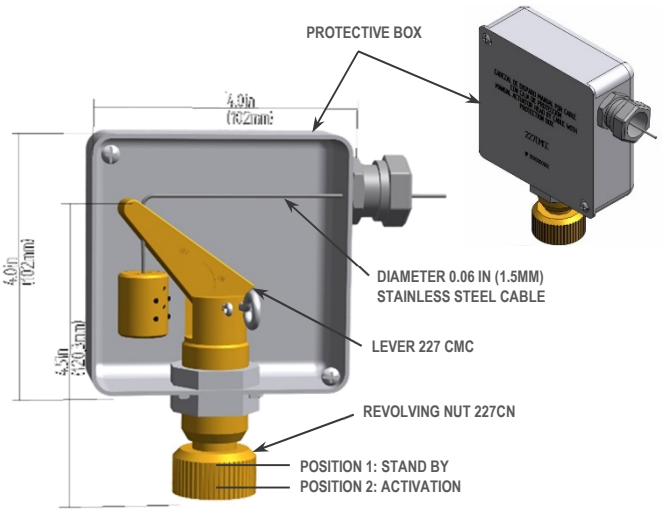


227CMC manual cable-operated actuator head and 227CMCC with protective box

It is used to remotely actuate the extinguishing system. This manual cable-operated actuator head actuator can be installed on the side actuation port of the RGS-MAM-12-FD1 valve, or mounted on top of the electric actuator installed on that valve, and is connected by cable inside a conduit (protective pipe) to the remote manual pull station.

The lever end includes a hole to tie the cable. The only difference between the 227CMC and 227CMCC models is that the latter (227CMCC) is housed inside a protective enclosure.

The cable is installed inside a steel pipe, using pulley elbows (TK-CPx) that allow for the directional changes required by obstacles and the elevation variations needed to reach the 227CMC or 227CMCC manual cable-operated actuator head.

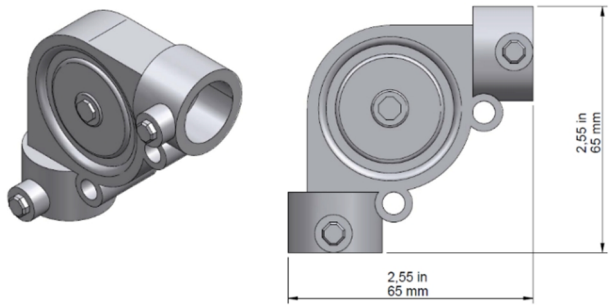


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TK-CPx pulley elbow

The pulley elbow is installed as part of the manual cable-operated actuator head and provides a change of direction with minimal force loss due to friction. Its function is to drive the stainless steel cable to avoid obstacles through the necessary directional changes to connect the remote manual pull station without tension (TK-DMS) with the 227CMC or 227CMCC manual cable actuator.

In addition, it connects the detection kits with the mechanical control unit and with all components that operate using detection cable. It contains a small internal bearing to guide the cable and completely eliminate friction.



ALL ACTUATORS AVAILABLE FOR 12-FD1 CONTAINER VALVES AND THE ST-FL1-Ø6 END OF LINE ARE SHOWN ON PAGE 6.

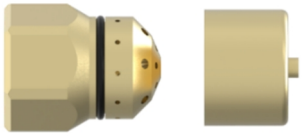
Nozzles

Its function is to discharge the extinguishing agent into the protected area as homogeneously as possible to achieve effective suppression.

In the AG-TINDTC-68-ABC dry chemical systems, up to 8 nozzles can be installed, while the AG-TINDLC-72-xBC can be installed with up to 12 nozzles, which model depends on the application:

AG-TF-1 total flooding nozzle

This nozzle is intended for total flooding application of dry chemical and is threaded onto the discharge piping in a vertical position.



AG-O-2 local application nozzle

Designed for local application fire protection systems, it is threaded onto the discharge pipe in a vertical position.



AG-TK-1 local application nozzle

Developed for the protection of flammable liquid storage tanks or to cover by immersion areas prone to flammable liquid spills. It is installed next to the tank and discharges at a 90º angle to the piping, creating a flat semicircular chemical blanket over the surface of the flammable liquid.

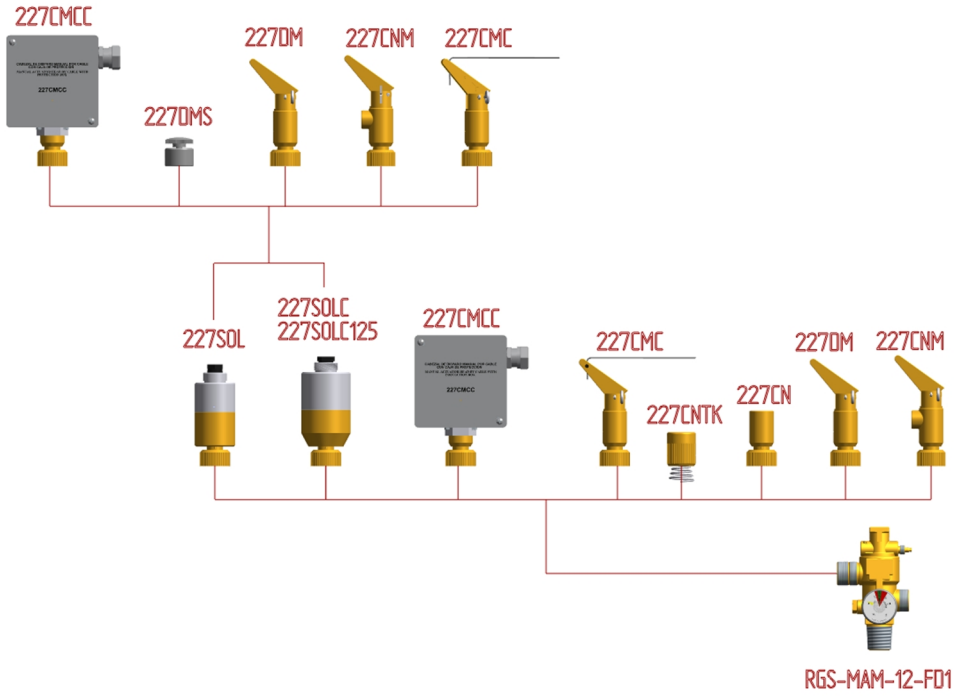


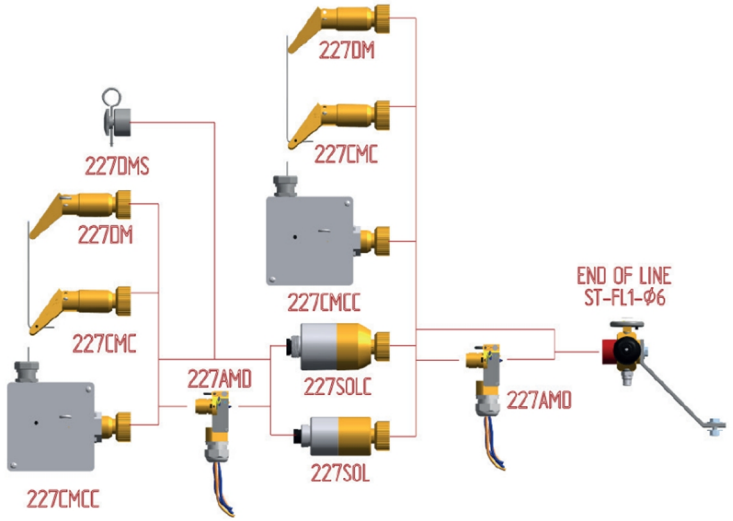
ⓘ This document provides a simplified overview of the most common system components. For further information, please contact AG FIRE SPRINKLER.

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Actuator configuration

There is a wide range of actuators available depending on the requirements, as a complement to activation via the RG TRACE™ heat detection tubing. All have the same function: to activate the discharge of the dry chemical system, and they can be installed either on the detection cylinder valve or at the end of the line. Typically, the system is fitted with a 227DM actuator head on the end of the line.





WARNING: This type of system is manufactured and approved for use in fixed 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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