

联源(杭州)工程技术有限公司 **UNITEDSOURCE HIGH-TECH**

Since 2021

CATALOG



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GLOBAL SUPPLIER AND GLOBAL PROVIDER

CATALOGUE

Dafo-V Fire Suppression System

Kitchen Fire Suppression System

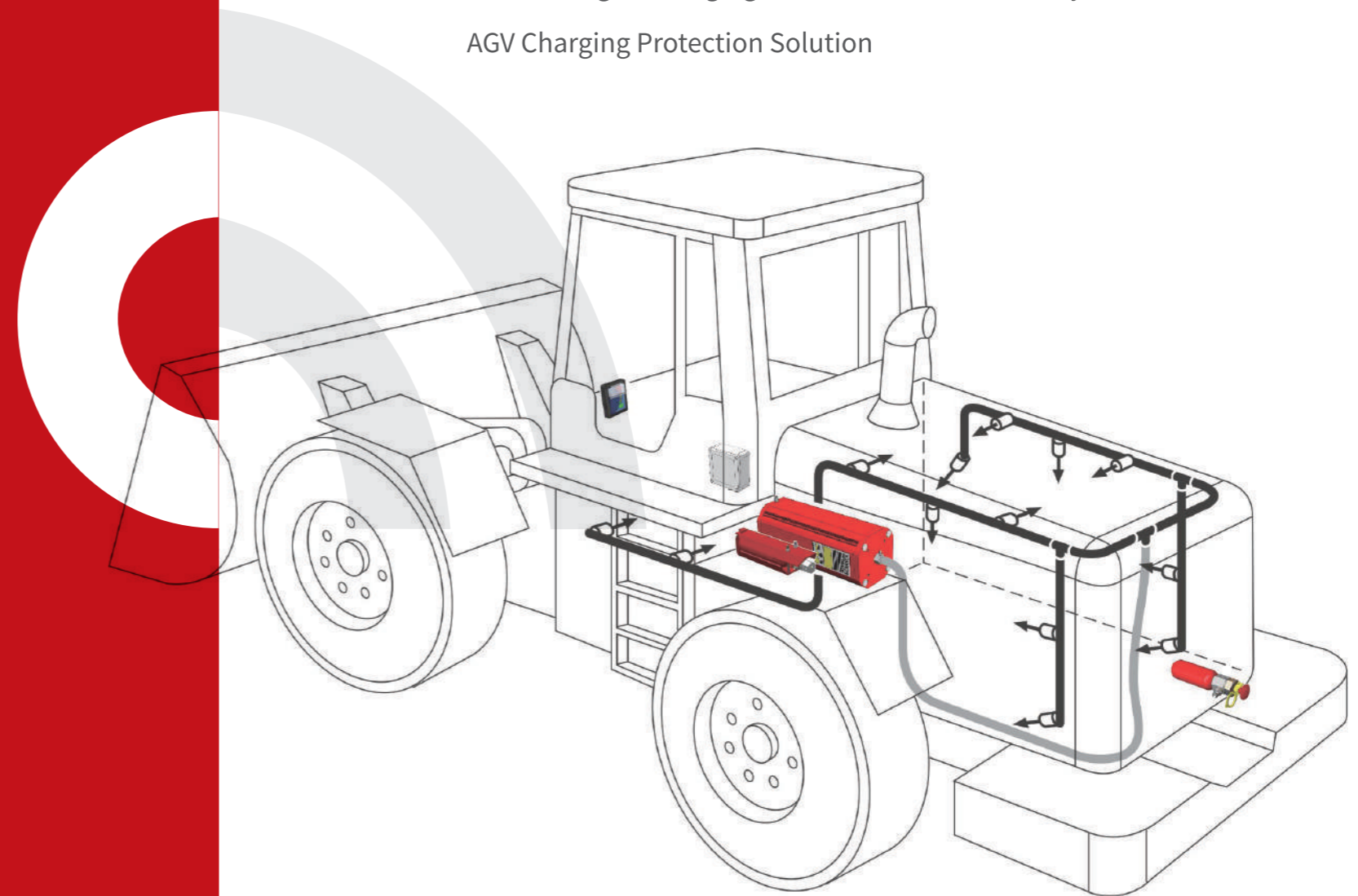
Li-ion Battery Fire Protection Solution

Aerosol Fire Suppression System

Clean Agent Fire Suppression System

F90 Charging & Storing Cabinet For Li-ion Battery Device

AGV Charging Protection Solution



01

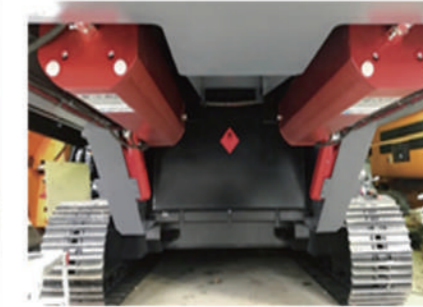
DAFO-V FIRE SUPPRESSION SYSTEM



APPLICATION CASES



Port Facilities



Engineering Vehicles



Mining Machinery

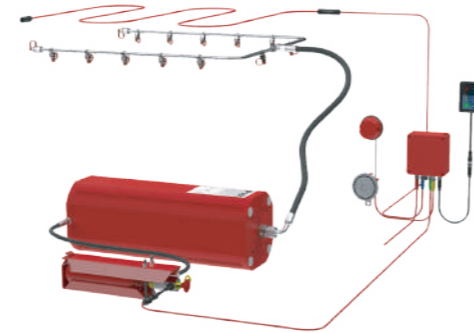


Forestry Machinery



Bus

Dafo Vehicle offers the most reliable and effective fire detection and suppression systems for applications in heavy vehicles in material handling, and many other areas. The systems are designed to survive demanding conditions, secure the safety of operations and business continuity, as well as the impact on investment. Dafo Vehicle's robust system not only protects individual hazards within the vehicle, but it is also a system that easily can be maintained and refilled on-site which reduces downtime and operational costs with very low TCO.



BENEFITS

- Strong cooling effect
- Effective Flame Knockdown
- Film forming effect to prevent re-ignition
- Non-pressurized container
- High penetration capability
- Freeze protected down to -50° C
- Easy maintenance
- Easy to clean up after discharge
- Independent system
- Non-corrosive
- Environment friendly



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KITCHEN FIRE SUPPRESSION SYSTEM

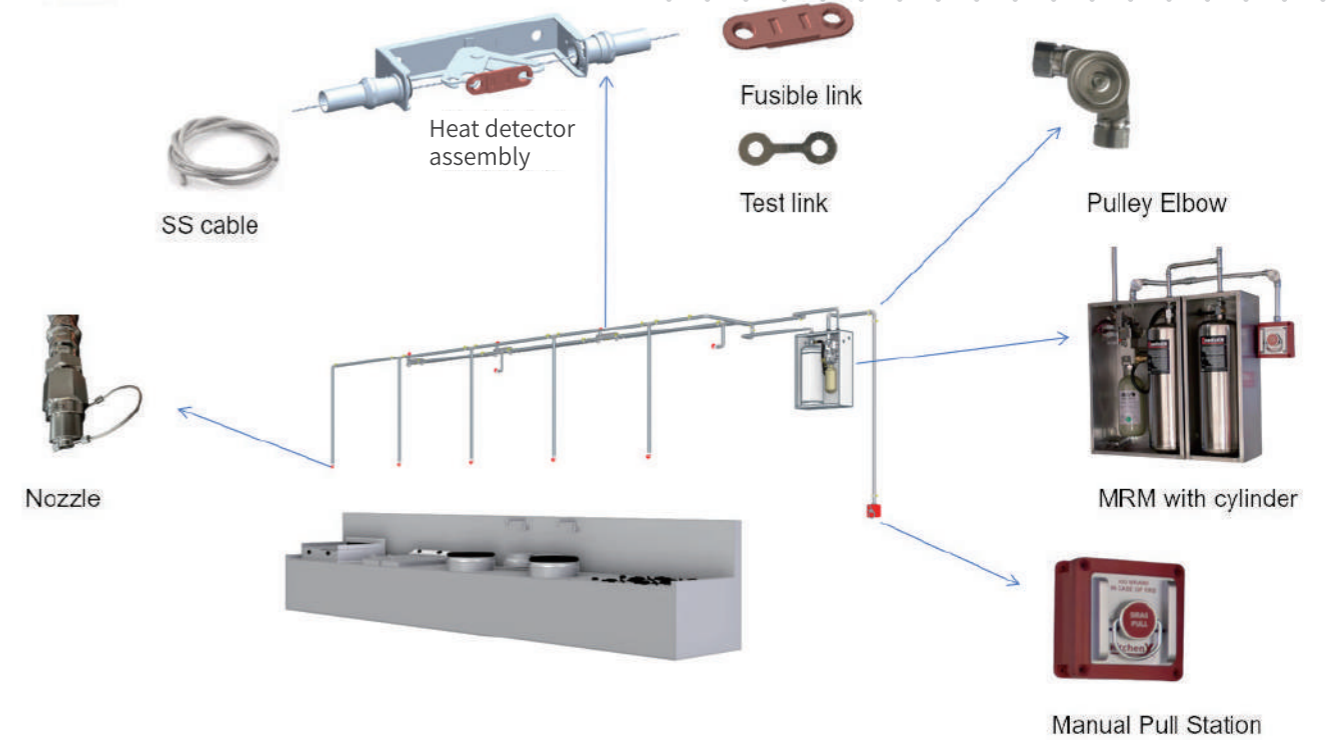


Technical Information:
Design according: EN 17446

Structure:

The Kitchen fire suppression system has four main parts, a central unit with a container and a release mechanism in a stainless-steel cabinet, pipe system with nozzles, a detection system and a manual release system. The system is automatic but can also be triggered manually with a wire from a pull handle. It is completely mechanical and works independently of water or power supply. The system can be adapted from the smallest barbecue kiosk to the largest restaurant kitchen. The suppressant container is no larger than a standard hand fire extinguisher and if necessary, two or more can be easily connected to cover all types of kitchens.

Parts



Technical Information:

Component	Size	Storage temperature	Operating temperature	Shelf life
Wet chemical agent	11.7L SS cylinder -single	-40°C to 55°C	-5°C to 55°C	12 years

Component	Flow Point	Spray angle
Nozzle type 1-110	1	110°
Nozzle type 1-60	1	60°
Nozzle type 2-30	2	30°
Nozzle type 2-60	2	60°

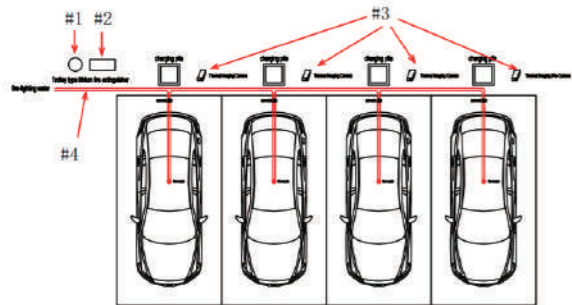
Component	Temperature
Fusible link 74°	74°C
Fusible link 100°	100°C
Fusible link 138°	138°C
Fusible link 182°	182°C
Fusible link 232°	232°C
Fusible link 260°	260°C

03

LI-ION FIRE PROTECTION SOLUTION

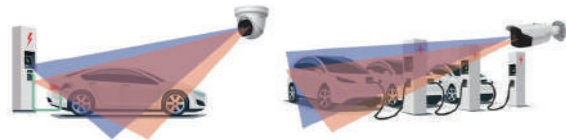


Electric Vehicle Water-Mist Suppression System



Fully automatic operation starts without human intervention

The all-encompassing water mist system avoids ignition of surrounding vehicles and makes the loss controllable. The patented nozzle design uses only 1/7 of the water consumption of conventional water mist nozzles. Optional lithium battery special fire extinguishing agent mixing device to improve fire extinguishing performance.



Sprinkler head and extension rod can be used as a stand-alone system (manual operation required)



EV Mobile Fire Station

6mx8m Electric Vehicle Fire Blanket

※temperature resistance: 1100°C, spike 1700°C

- CUT OFF THE AIR
- Prevents the spread of vehicle fire by smothering it.
- Prevents the fire from spreading to other vehicles or nearby infrastructures.
- ISOLATE POISON GAS
- Efficiently stops the release of toxic and opaque fumes.
- Limits the damages caused by the incident.
- CONTROL THE FIRE
- Makes it easier for firemen to control the fire, circumscribing it with minimum means and in the shortest time possible.



9L Lithium Battery Fire Extinguisher



※EN3 approval number: SP 199/22

※fire rating: 27A Li (EN3 standard)

- It is an agent proven to extinguish lithium-ion batteries, without re-ignition.
- It is completely fluorine-free, contains no PFOA, PFOS or any fluorine ingredients.
- It is non-corrosive, non-toxic, non-hazardous and fully biodegradable.
- Suit for Class A Fire and devices with lithium battery capacity less than 600Wh

45L Li-ion Battery Mobile Extinguisher

45L Lithium battery fire extinguisher

※hose length: 4m

- It is an agent proven to extinguish lithium-ion batteries, without re-ignition.
- It is completely fluorine-free, contains no PFOA, PFOS or any fluorine ingredients.
- It is non-corrosive, non-toxic, non-hazardous and fully biodegradable.
- Suit for Class A Fire and devices with lithium battery capacity less than 3KWh



IT IS SUITABLE FOR FIRE CONTROL AND EXTINGUISHING OF LITHIUM BATTERIES SUCH AS NEW ENERGY VEHICLES, ELECTRIC VEHICLES, AND CIVIL ENERGY STORAGE CABINETS

- No water source is required and can be used outdoors or in areas where there is a lack of fire water. The 6m x 8m car fire blanket weighs about 33kg and can be packed in a rucksack or bag.
- When a fire blanket covers a burning vehicle, it stops the fire from spreading, isolates the air and extinguishes the fire automatically.
- The fire blanket has an instantaneous temperature resistance of about 1700 °C, a long-term temperature resistance of 1000 °C, and can be reused in an undamaged state.
- The use of combined fire extinguishing bombs can quickly extinguish the fire of new energy vehicles and reduce the temperature from 1100°C to below 200°C.

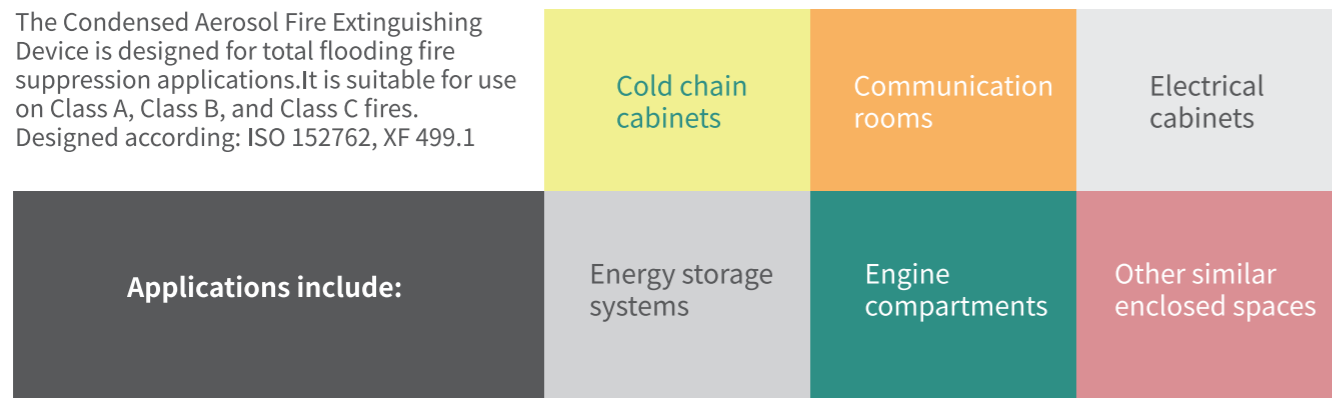
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AEROSOL FIRE SUPPRESSION SYSTEM



INTRODUCTION

The Condensed Aerosol Fire Extinguishing Device is designed for total flooding fire suppression applications. It is suitable for use on Class A, Class B, and Class C fires. Designed according to: ISO 152762, XF 499.1



Control panel
 main: 110V/220V
 backup battery: 24V 5Ah
 max loading: 256 inputs, 100W



Aerosol device
 Active method: Heat + Electric
 Heat active: $\geq 170^{\circ}\text{C}$
 Electric active: $\geq 1.5\text{A}$
 Agent net weigh: 10g ~ 3000g



5 in 1 detector
 CO
 Smoke
 Heat
 VOC
 H₂

THERMAL ACTIVATE TYPE FOR COMPACT SPACE



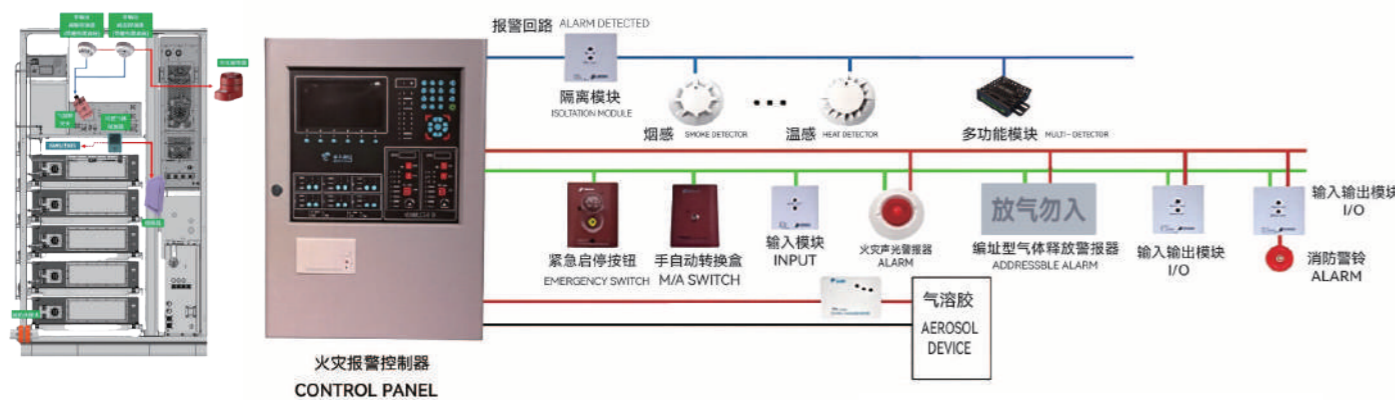
Electrical cabinets
 Battery pack
 Civil energy storage system
 Battery Charging room
 EV charging pile
 Computer
 Diesel storing room

Main features:
 Miniaturized construction
 Zero-pressure storage
 Rapid extinguishing action
 reliable, environmentally friendly
 Maintenance-free

SYSTEM INFORMATION:

Technical information:

Working Temp.	Activation method	Main agent	Service life	Standard
-50°C~+90°C	Electric and/or Thermal (185±10°C)	Potassium Nitrate	10years maintainace free	XF499.1-2010 ISO 15779.2



Model	QRR0.012G	QRR0.040G	QRR0.1G	QRR0.15G	QRR0.3G	QRR0.5G	QRR2.5G
Agent netweight	12g	40g	100g	150g	300g	500g	2500g
Activation method	thermal	Electrical and / or Thermal					
Max. Protected volume	0.12m ³	0.4m ³	1.0m ³	1.5m ³	3.0m ³	5.0m ³	25m ³

05

CLEAN AGENT FIRE SUPPRESSION SYSTEM



With the developments of the AIM Act phasing down the usage of HFCs, including FM-200™, a common fire suppression agent, and 3M™ announcing they will cease production of Novec 1230™, we responded by drastically enhancing and improving our offerings using FK-5-1-12.

Our clean agent fire suppression systems do not require electronic fire detectors. Instead, the system detects fires using specially designed tubing. The tubing is made of a flexible polymer that can be installed anywhere a fire might start. Fire tubing can detect both heat and flames. When it detects either, then it bursts open, activating the system.



Features of FK-5-1-12 Clean Agent :

- Ozone Depleting Potential (ODP) of Zero
- No post-fire residue or clean up
- No damage to protected equipment
- Is electrically non-conductive
- Safe for use in a wide range of normally occupied hazard areas
- Atmospheric lifetime of approximately 5 days
- Very low Global Warming Potential (GWP) of just 1

Typical Application:

- Telecommunication switch rooms
- Computer and electronic control rooms
- Data Centre
- Marine Engine Rooms
- Wind turbine
- Control Rooms in Power Generation Plants
- Control Rooms in Petrochemical Installations

Environmental Properties

Description	FK-5-1-12	Halon 1301	HFC-125	HFC-227ea
Ozone Depletion Potential	0.0	12.0	0.0	0.0
Global Warming Potential	1	7140	3500	3220
Atmospheric Lifetime (Years)	0.014 (5 days)	65	29	34.2

Reference : World Meteorological Organization (WMO) 1998, Model-Derived Method Intergovernmental Panel on Climate Change (IPCC) 2007 Method, 100-year ITH

Technical Information:

Cylinder type	FK5112 weight	Working temperature	Operating temperature	Maximum protection room (sealed)
1L/3lb	1kg	-20°C-+60°C	90°C±10°C 110°C±10°C 140°C±10°C 170°C±10°C	1.2m ³
3L/11lb	3kg			3.6m ³
4L	5kg			6.0m ³
5L/14lb	6kg			7.2m ³
7L	9kg			11.6m ³
9L	12kg			15.5m ³

06

F90 CHARGING & STORAGING CABINET FOR LI-ION BATTERY DEVICE

Li-ion® Lithium Battery Charging cabinets have been designed with a Fire Wall Insulation between the external and internal surfaces of the steel to aid in impeding the spread of fire should it occur within the cabinet. Tested by SGS according EN14470-1 and EN 1363-1.

Standard Features:

Minimal 10amp supply

Up to 36 charging points

40mm / 60mm thick Firewall insulation rated at 1060°C for 60min / 90min

Anti-static polyester powder-coated

Heavy duty universal wheel or forklift hole

With CE and RoHS approval

Smoke filter device for middle and large charging cabinet

Smoke alarm system

Active cooling system



Technical Information:

Product code	LION-CAB-S	LION-CAB-M	LION-CAB-L
Description	Charging Cabinet with single socket	Charging Cabinet with 4 sockets	Charging Cabinet with 5 sockets
Adjustable Shelves	None	2	3
Moveable	With 4x wheels	With lift holes	With lift holes
Coating color	Silver gray (custom acceptable)		
Anti-Static coated	Yes		
Anti-Fire	60min	90min	
Smoke filter	choosesable		
Cooling system	choosesable		
Fire suppression device (withCE)	1set	3set	4set
Wall thickness	40mm	60mm	
Size(L*W*H, mm)	520*415*420	1200*1080*600	2000*1200*600

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AGV CHARGING PROTECTION SOLUTION



Technical Information:

Room size (cm)	50*45*70 upto 500*210*210
Detector	heat smoke thermal
Agent	Li-ion Foam / Watermist / FK5112
Alarm System	Yes
Fire agent volume	6L to 1000L
Flow	3L/ piont*min