

GAS SUPPRESSION SYSTEM

Kidde Fire Protection

Novec™ 1230

Novec 1230 is a fluoroketone developed specifically by 3M for fire protection use. It is a compound of carbon, fluorine and oxygen ($\text{CF}_3\text{CF}_2\text{C}(\text{O})\text{CF}(\text{CF}_3)_2$). It is colorless, low-odor and electrically non-conductive. It suppresses fire by a combination of chemical and physical mechanisms without affecting the available oxygen. This allows personnel to see and breathe, permitting them to leave the fire area safely.



Novec 1230 Cylinders

CYLINDERS

A WIDE RANGE OF SIZES FROM 5 TO 368 LITRE IS AVAILABLE, OFFERING A CHOICE OF FILL CAPACITIES TO MEET SPECIFIC REQUIREMENTS AND ENSURE TO MEET SPECIFIC REQUIREMENTS AND ENSURE MAXIMUM ECONOMY IN INSTALLATION. EACH CYLINDER IS MANUFACTURED FROM HIGH STRENGTH ALLOY STEEL.



2 1/2" 316 Cylinder Valve Assembly

VALVES

VALVES ARE DESIGNED FOR OPTIMUM SYSTEM PERFORMANCE, ALLOWING PIPE SIZE TO BE REDUCED AND INSTALLATION COSTS TO BE LOWERED. THEY ARE MANUFACTURED FROM TOUGH, CORROSION-RESISTANT BRASS UNDER STRINGENT QUALITY CONTROL STANDARDS. A PRESSURE MONITORING GAUGE AND/OR PRESSURE SWITCHES ARE PROVIDED FOR EASY SERVICING. VALVES ARE ACTUATED BY ELECTRIC SOLENOID PNEUMATIC, OR LOCAL MANUAL RELEASE AT CONTROL HEAD.



Discharge nozzles

NOZZLES

CUSTOM-DESIGNED NOZZLES ARE AVAILABLE WITH NOMINAL PIPE SIZES FROM 1/4 TO 2 INCH INCLUDING 180° AND 360° CONFIGURATIONS.



Pressure switch

PRESSURE SWITCH

THE CYLINDER SUPERVISORY PRESSURE SWITCH IS INTENDED TO DETECT A FALL IN PRESSURE IN THE KIDDE ENGINEERED SYSTEM CYLINDER. THE CYLINDER SUPERVISORY PRESSURE SWITCH CAN BE WIRED FOR EITHER NORMALLY OPEN OR NORMALLY CLOSED OPERATION DEPENDING ON INSTALLATION REQUIREMENTS. THIS CYLINDER SUPERVISORY PRESSURE SWITCH CAN BE INSTALLED ON KIDDE ENGINEERED SYSTEM CYLINDERS, 10 LB. THROUGH 350 LB. SIZE.

A long-term, sustainable technology.

With zero ozone depletion potential, extremely low global warming potential and short atmospheric lifetime, Novec 1230 fluid is the first halon replacement to offer a viable, long-term, sustainable technology for special hazards fire protection.

3M™ Novec™ 1230 Fire Protection Fluid Environmental Properties

Properties	Novec 1230	Halon 1211	Halon 1301	HFC-125	HFC-227ea
Ozone Depletion Potential (ODP)	0.0	5.1	12.0	0.0	0.0
Global Warming Potential	1	1300	6900	3400	3500
Atmospheric Lifetime (Years)	0.014	11	65	29	33
SNAP (Yes/No)	Yes	N/A	N/A	Yes	Yes

* World Meteorological Organization (WMO) 1998, Model-Derived Method.
* Intergovernmental Panel on Climate Change (IPCC) 2001 Method, 100 Year IR.

The widest margin of safety.

Because its use concentration is much lower than its No Observable Adverse Effects Level (NOAEL), Novec 1230 fluid offers the widest margin of safety of any viable halon replacement available on the market today.

Note: Industry standards require egress from a protected enclosure prior to system discharge.

3M™ Novec™ 1230 Fire Protection Fluid Safety Margin

Agent	Novec 1230	Halon 1301	HFC-125	HFC-227ea
Use Concentration	4-6%	5%	87-12.1%	75-87%
NOAEL*	10%*	5%	75%	9%
Safety Margin	67-150%	Nil	Nil	3-20%

* NOAEL for cardiac sensitization.

* NOAEL for acute toxicity, including cardiac sensitization.

GAS SUPPRESSION SYSTEM



FM-200

FM-200 is a clean agent fire suppression system that protects high-value assets from fire and the effects of fire-fighting, allowing normal operations to be resumed quickly with no collateral damage and clean-up costs. Kidde Fire Protection is at the forefront of new technologies in fire safety, offering a range of state-of-the-art fire extinguishing systems.



FM-200 EQUIPMENT

FM-200 CYLINDER WITH CYLINDER VALVE, PRESSURE GAUGE. THE AGENT WILL BE FILLED LESS THAN 50 % OF CYLINDER VOLUME AND PRESS N2 AT 360 PSI. THE CYLINDER HAVE 9 SIZES ARE 5 LTR, 8LTR, 16 LTR, 28 LTR, 51 LTR, 81 LTR, 142 LTR, 243 LTR & 386 LTR



CYLINDER

SOLENOID VALVE

SOLENOID VALVE ACTUATOR WITH LEVER OPERATED CONTROL HEAD. THE SOLENOID WILL BE USED SINGAL 24 VDC FROM CONTROL PANEL TO OPEN CYLINDER VALVE TO RELEASE AGENT AND LEVER OPERATE BY MECHANIC IN CASE NO POWER. ITS INSTALL ON CYLINDER VALVE



PRESSURE OPERATED CONTROL HEAD

Electric Control Head

Electric & Cable Operated Control Head

LEVER OPERATED CONTROL HEAD

PRESSURE OPERATION HEAD

ELECTRIC CONTROL HEAD (STACK TABLE)

OTHER PRODUCTS

FIRE CONTROL PANELS

THE "BRAIN" FOR YOUR FIRE PROTECTION SYSTEM, CONTROL SYSTEMS RECEIVE INPUT FROM DETECTION DEVICES, SHUTDOWN EQUIPMENT AND ACTIVATE YOUR SUPPRESSION EQUIPMENT, IF NECESSARY.



PGAsys Intelligent Fire Control Panel



Control Panel ARIS



Control Panel ARG5



In Cabinet FM200 Fire Suppression System

WARNING DEVICES

WARNING DEVICES INCLUDES CONVENTIONAL TYPES AND ADDRESSABLE VERSIONS COMPATIBLE WITH APOLLO XP95 DISCOVERY AND HOCHIKI ESP PROTOCOLS



Fire Detection Series 80



Saddard Indoor Callpoint



Waterproof Callpoint



Manual Extinguisher Release



Motorised Bell 4" 4" 1/2"

ACCESSORIES

STORED PRESSURE FIRE PROTECTION



Alarm Sounder Mode



Sounder / Beacon Mode



Pressure Operated Control Heads



Discharge Nozzles



Valve Outlet Adapters



Transfer Switch



Discharge Groove Nut



Discharge Size Multijet Nozzle CO2



Pressure Switch Explosion Proof



KVS Cylinder Bracket

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CO₂

The CO₂ is stored as liquid, under pressure. When a system is activated, flows through discharge the liquid co pipework to specially designed nozzles. The agent's low boiling point nozzles. The agent's low boiling poin means that the liquid vaporises vaporises rapidly during the discharge, providing a penetrative three - dimensional action. The rapid expansion of the gaseous three - dimensional action. The rapid expansion of the gaseous agent allows fires to be targeted even in the most inaccessible areas of the risk, hree - dimensional action. The rapid expansion of the gaseous

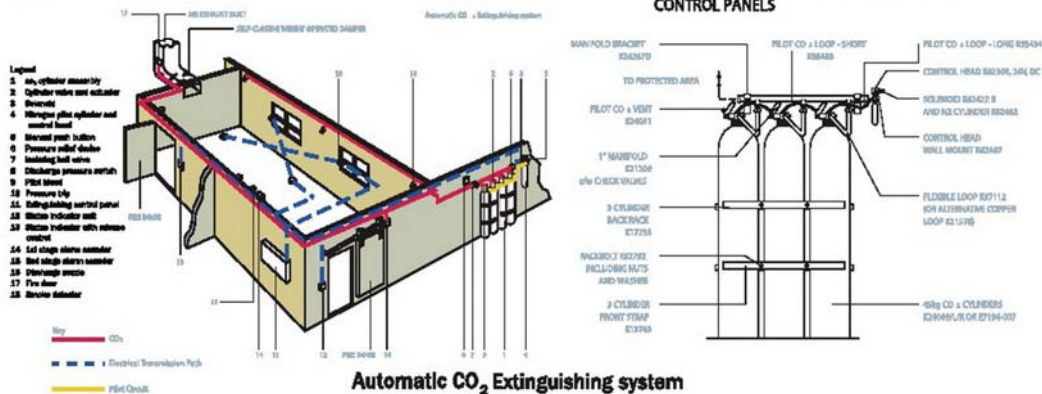


CO₂

CARBON DIOXIDE IS A STANDARD COMMERCIAL WITH MANY OTHER USES AND IT IS READILY AVAILABLE THROUGHOUT THE WORLD. BECAUSE OF ITS UNIVERSAL USE IT CAN BE OBTAINED CHEAPLY AND THIS IS AN IMPORTANT CHEAPLY AND THIS IS AN IMPORTANT CONSIDERATION WHEN FREQUENT RECHARGING OF STORAGE CONTAINERS IS NECESSARY AS IN LOCAL APPLICATION SYSTEMS, WHERE FIRES MAY GE MORE FREQUENT.

BENEFITS

- HIGH FLOW 'KLEM' VALVE
- PILOT CYLINDER OR DIRECT ACTING SOLENOID
- CONTINUOUS WEIGHT MONITORING OPTION
- DESIGN COMPLIANCE WITH BS5306-4
- FULLY COMPATIBLE WITH KIDDE EXTINGUISHING CONTROL PANELS



Automatic CO₂ Extinguishing system



CARBON DIOXIDE GAS FIRE HOSE REEL UNIT

THE CAPACITY OF 22.7 KG Co2 CYLINDER IS 4-5 TIMES GREATER THAN THAT OF THE LARGEST Co2 HAND HELD EXTINGUISHER. THE Co2 HOSE REEL UNIT IN THEREFORE IDEAL FOR FIGHTING FIRES WHICH SUDDENLY BREAKOUT IN MANNED INDUSTRIAL AREAS SUCH AS ASSEMBLY LINES, PAINT SPRAY BOOTHS AND PRINT SHOPS: AS WELL AS ON BOARD SHIPS IN ENGINE AND BOILER ROOMS GALLEYS & ETC. IT IS ALSO IDEAL FOR AREAS WHERE CONTAMINATION AND CLEAN-UP TIME ARE VERY IMPORTANT FACTORS.

THE TELESCOPIC APPLICATOR (OPTIONAL) IF USED IS SUITABLE FOR AIRCRAFT FIRES OR EXTENDED APPLICATIONS.