



LEADING THE FIGHT  
AGAINST FIRE





# Leading the Fight Against Fire

Established in 1974, Steel Recon Industries Sdn Bhd (SRI) is proudly a Malaysian company that offers a comprehensive range of firefighting products, equipment and technology solutions through a vast network of distributors worldwide.

Always at the forefront of Malaysian firefighting advances, SRI's products are certified by international standard boards such as VdS, LPCB, BSI, UL, FM and SAI Global, underlining our commitment to the provision of the most reliable firefighting solutions for local and global needs.

SRI's products are manufactured in our state-of-the-art facilities which allows us to produce quality products along with the flexibility to cater to specific needs and standards. As we progress into the future, the pioneering spirit that propelled SRI's success continues to drive us. We will lead the way with technology and cutting-edge research, backed by local expertise and 45 years of experience, to deliver unrivalled protection to your people and property.



# Protecting Businesses

KitchenShield is SRI's automated fire extinguishing system for commercial kitchens that is designed to quickly detect and extinguish fires using an environmentally friendly wet chemical extinguishing agent. The agent is ideal for fighting Class A, B and F fires, and does not damage or contaminate kitchen equipment.

Available with three types of detection and a wide range of cylinders, KitchenShield is the cost efficient

solution designed to provide total coverage of your kitchen equipment through an overlapping discharge pattern by the nozzles. Post installation, this discharge pattern allows for owners to easily interchange kitchen configurations to suit changing business needs.

Backed by a team of system specialists, SRI will guide you through system specification and design as well as the easy installation process.

## Features



**Rapid Fire Detection**



**Immediate Fire Suppression**



**Design Flexibility**



**Easy Maintenance**



**24 Hour Fire Protection**



**Quick Clean Up**

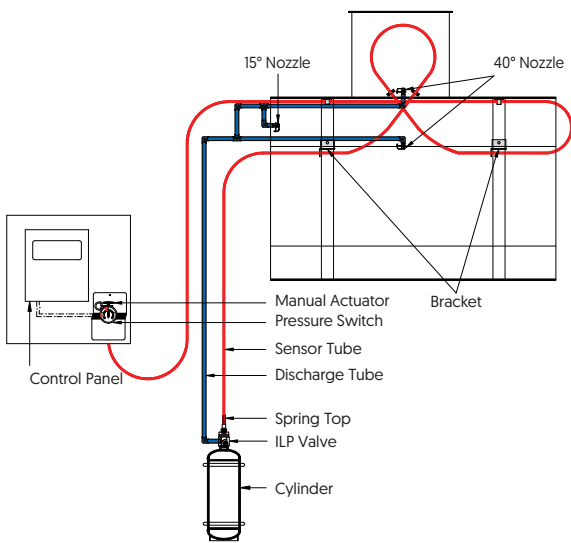
## Types and Capacity of System

Type	1	2	3	4	5	6	7	8
Agent Volume	8 L	10 L	12 L	15 L	17 L	19 L	22 L	26 L
Cylinder Volume	12 L	15 L	20 L		30 L			35 L
Nozzle Quantity	3	3	5	6	7	8	9	11
Volume Per Nozzle	2.6 L	2.5 L	2.4 L	2.5 L	2.4 L	2.3 L	2.4 L	2.3 L
Hood Length	0.8 m	1.6 m	2.5 m	3.4 m	4 m	4.2 m	5.1 m	6 m
Heat Detector Quantity	2	3	4		5	5	6	7
Product Code	SPS-KS014-CYL-12L	SPS-KS014-CYL-15L	SPS-KS014-CYL-20L		SPS-KS014-CYL-30L			SPS-KS014-CYL-35L





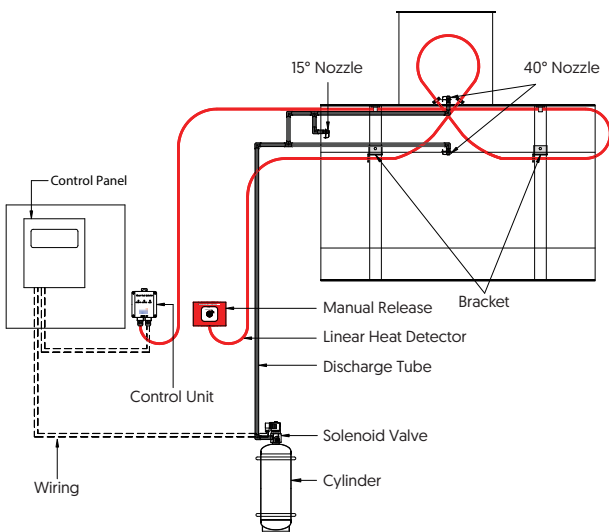
## Sensor Tube System



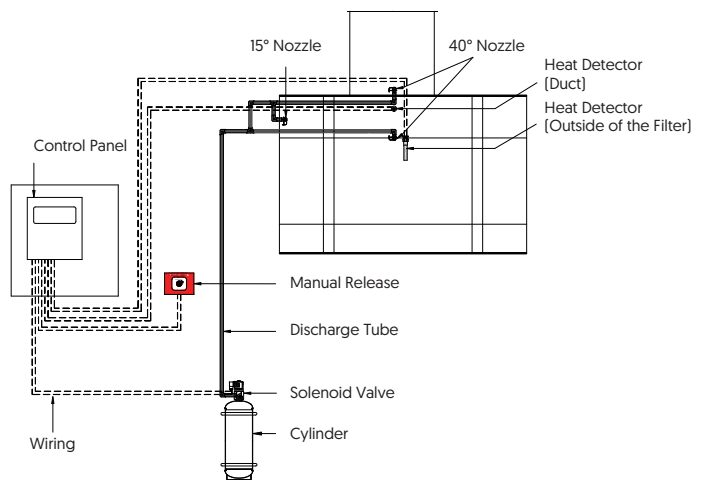
## Specifications

<b>Propellant</b>	Nitrogen
<b>Cylinder Volume</b>	9 liters, 12 liters, 20 liters, 30 liters, 35 liters
<b>Filling Pressure</b>	20 bar
<b>Sensor Tube Burst Temperature</b>	170°C
<b>Linear Heat Detector Activation Temperature</b>	180°C / 230°C
<b>Heat Detector Activation Temperature</b>	230°C
<b>Operating Pressure Range</b>	15 - 20 bar
<b>Actuation</b>	Manual / Automatic
<b>Extinguishing Agents</b>	Wet Chemical

## Linear Heat Detector System



## Heat Detector System



# KitchenShield Components



## Cylinder

Part Number	Cylinder Size [L]	Agent Volume [L]	Diameter (mm)	Height (mm)	Material
FEC004-MS-12LT-KS	12	8	180	545	Mild Steel
FEC004-SS-12LT-KS	12	8	180	545	Stainless Steel
FEC004-MS-15LT-KS	15	10	180	650	Mild Steel
FEC004-SS-15LT-KS	15	10	180	650	Stainless Steel
FEC004-MS-20LT-KS	20	12/15	255	572	Mild Steel
FEC004-SS-20LT-KS	20	12/15	255	572	Stainless Steel
FEC004-MS-30LT-KS	30	17/19/22	255	724	Mild Steel
FEC004-SS-30LT-KS	30	17/19/22	255	724	Stainless Steel
FEC004-MS-35LT-KS	35	24/26	255	800	Mild Steel
FEC004-SS-35LT-KS	35	24/26	255	800	Stainless Steel

## ILP Valve



Part Number	SPS-KS002-402-23
Material	Brass nickel-plated
Pressure Gauge Connection	M10X1
Sensor Tube Connection	Sensor Tube OD 6mm
Dip Tube Thread	M16 x 1.5mm
Valve Outlet	G1/4"

\* For Sensor Tube System Only



## Solenoid Valve

Part Number	SPS-KS002-420-12
Material	Brass nickel-plated
Voltage	24V DC
Power Consumption	12 Watt
Pressure Gauge Connection	M10X1
Valve Outlet	G1/4"

\* For Linear Heat Detector & Heat Detector System

## Manual Actuator



Part Number	SPS-KS003-110-MA
Material	Brass nickel-plated
Pressure Gauge Connection	M10X1
Sensor Tube Connection	Sensor Tube OD 6mm

\* For Sensor Tube System Only



## Pressure Gauge with Switch

Part Number	SPS-KS005-051-NC
Range	0 to 40bar
Connection	M10X1
Leakage Monitoring	17bar
Activation Monitoring	5bar

\* For Sensor Tube System Only

# KitchenShield Components

## Sensor Tube



<b>Part Number</b>	SPS-KS001-XXX-BK
<b>Permeability</b>	10-4 mbar l / sec (Helium)
<b>Dimensions</b>	Ø6 x 1mm (inner Ø - 4mm)
<b>Recommended Bending Radius</b>	150mm (min. 100mm)
<b>Material</b>	PVC
<b>Burst Temperature</b>	Approximately 170°C

## Heat Detector



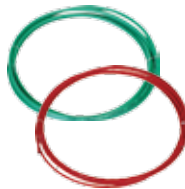
<b>Part Number</b>	SPS-KS001-THERMAC
<b>Contacts</b>	Normally open, close on temperature rise
<b>Applied Voltage AC @ 0.25A</b>	32V max
<b>Applied Voltage DC @ 0.25A</b>	32V max
<b>Operating Current</b>	0.25A max
<b>Operating Temperature Range</b>	232°C
<b>Ambient Temperature Range</b>	-40°C to +180°C
<b>Relative Humidity</b>	100 %
<b>Weight</b>	150 gram
<b>IP Rating</b>	IP 67
<b>Sensitivity &amp; Accuracy</b>	+/-5% or 5 degrees
<b>Mounting Screw Threads</b>	10 Kgm torque max

## Nozzle



<b>Part Number</b>	SPS-KS007-NOZ-15 SPS-KS007-NOZ-14
<b>Spray cone diameter @ 1000mm height</b>	1100mm for Nozzle 40°, 500mm for Nozzle 15°
<b>Spray form</b>	Full cone

## Linear Heat Detector



<b>Part Number</b>	SPS-KS038-LHD-185 (180°C) & SPS-KS038-LHD-230 (230°C)
<b>Conductor</b>	Tinned copper-covered steel
<b>Insulation</b>	Temperature-sensitive thermoplastic
<b>Bandage</b>	Polycarbonate
<b>Jacket</b>	Thermoplastic strip braid
<b>Operating Voltage</b>	24V DC
<b>Allowed voltage range</b>	16V DC - 28V DC
<b>Standby current</b>	≤ 20mA
<b>Alarm current</b>	≤ 30mA
<b>Fault current</b>	≤ 25mA
<b>Max. relative humidity</b>	90%-98%
<b>IP rating</b>	IP66
<b>Detection temperature</b>	180°C / 230°C
<b>Min/Max Working temperature</b>	-40°C / 125°C & -40°C / 170°C

## Linear Heat Detector Control Unit



<b>Part Number</b>	SPS-KS038-CTL-XX
<b>Operating Voltage</b>	24V DC
<b>Operating Voltage Range</b>	16V DC - 28V DC
<b>Operating Current</b>	Standby: ≤ 20 mA Fire: ≤ 30 mA Fault: ≤ 25 mA
<b>Operating Environment</b>	Temperature: -55°C to 60°C Relative Humidity: 95%
<b>IP Rating</b>	IP 66
<b>Dimension</b>	90mm (L) x 85mm (H) x 52mm (W)

# Optional Accessories



## Remote Electromagnetic Actuator

Part Number	SPS-KS003-111-EA
Solenoid Actuator Voltage	24 VDC + 10%, Consumption: 12 W, Connection plug: DIN EN175301-803 type A
Pressure Gauge Connection	M10X1
Sensor Tube Connection	Sensor Tube OD 6mm

\* For Sensor Tube System Only



## Alarm Bell

Part Number	FAS194-LA-150-KW
Size	150mm
Voltage	24V DC
Current	30mA
Colour	Red

## Strobe Light



Part Number	FAS251-24VDC-WP
Voltage	24V DC
Current	40mA

## Clip



Part Number	SPS-KS039-CLP-SS304
Material	SS304 / Rubber

\* For Sensor Tube and Linear Heat Detector Systems

## Nozzle Laser Pointer



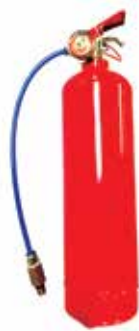
Part Number	SPS-KS020-LSR-RED
Material	SS304 / Brass



## Actuator Sensor Tube Gripping Tool

Part Number	SPS-KS034-GRP-XX
Diameter	75mm
Material	Rubber

\* For Sensor Tube System Only



## Refilling Cartridge

Part Number	SPS-KS013-MCX-XX
Capacity	1kg
Filling Pressure	25 bar

\* For Sensor Tube System Only



## Manual Release

Part Number	FAS260-PS-28V-RD
Dimension (mm)	110mm (W) x 80mm (H) x 47mm (D)

## Gas Shut Off Valve



Part Number	SPS-KS030-VLV-SO
Diameter	25mm
Voltage	24V DC 19W
Temperature Ambient	-15 +60°C
Ingress Protection	IP65

## Cylinder Bracket



Part Number	SPS-KS037-180-MS SPS-KS037-255-MS
Material	Mild Steel
Capacity	9 liters - 35 liters



# Optional Accessories



## Control Panel

Part Number	SPS-KS017-004-DEMCO*	SPS-KS017-002-DEMCO
Brand	Context Plus	Demco
Main supply voltage	230V AC, 50/60Hz	230V AC, 50/60Hz
Internal Power Supply	19V – 28.5V	19V – 28.5V
Total output current limited to	1.5A @ 230V AC (ImaxA=146mA)	1.5A @ 230V AC (ImaxA=146mA)
Battery requirement	2 x 12V 7AH	2 x 12V 7AH
Cable Type	Fire resistant screened cable, minimum conductor size 1mm <sup>2</sup>	PVC / Screen / Firerated cable
Maximum detectors per zone	32	32
Number of sounder circuits	4	4
Maximum no. of bells @ 25 mA	32	32
Maximum no. of electronic sounders @ 20 mA	40	40
Dimension	380 x 235 x 96mm	325mm x 325mm x 80mm
Weight	1.75kg (without batteries)	3kg (without batteries)

\* LPCB Approved

## Modular System

Part Number	SPS-KS001-CAB
Material	Mild Steel

\* Other materials available upon request

## Sensor Tube Fittings

Part Number	SPS-KS008-TFT-RO	SPS-KS031-ELP-RO	SPS-KS010-EOL-RO
Type	Tee Fitting	End of Line Plug	End of Line Plug with Check Valve
Fitting Connection	Ø 6mm	Ø 6mm	Ø 6mm M10X1
Material	Stainless Steel	Stainless Steel	Stainless Steel



## Sensor Tube Cutter

Part Number	SPS-KS021-TC-XX
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