



## FIRE SUPPRESSION PRODUCT CATALOGUE



*Fire Suppression Systems have basically not changed in concept for many decades, however Muster® II now utilises modern technology to produce a 24/7 fully monitored fire suppression system.*

JSG Industrial Systems introduces a state of the art innovation in product and system design, in their Muster<sup>II</sup> Fire Suppression System range. It combines the latest technologies with a simple design, and quick to connect wiring. The in-built accuracy of the Muster<sup>II</sup> Fire Suppression system is controlled using intelligent pressure sensors, ensuring that the discharge time meets the initial design criteria, effectively suppressing fires in the punishing environments where many machines operate.

The fully monitored Muster<sup>II</sup> Fire Suppression System is available in two fire sensing modes. Either MusterWire Linear Heat Detection (LHD) wire sensing or Loss of Pressure (LOP) sensing. The full monitoring available on both these system types, allows the operator to view the overall integrity of the system at any time, knowing that it is at the correct pressure and that all the sensors are active. This ensures the system is ready to actuate anytime a fire is detected.

A number of key innovations in the Muster<sup>II</sup> system provide intelligent performance and precise monitoring. These include MusterWire, the MusterCap, and the independently powered Muster<sup>II</sup> Alarm Panel. These innovations combine to deliver one of the lowest risk fire suppression systems on the market.

The new Muster<sup>II</sup> Fire Suppression System comes with stainless steel components; including the valve, cylinder and fittings, ensuring its performance in extreme temperatures and weather conditions.

Whatever the demand; the new JSG Industrial Systems Muster<sup>II</sup> Fire Suppression System will operate as designed, and to its full potential, suppressing the flames and protecting your assets and personnel.

## 24/7 INTEGRITY MONITORING LOWER RISK

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A full range of Safety Data Sheets are available  
[www.musterfire.com](http://www.musterfire.com)



Contact a JSG Representative for the latest version.

Muster<sup>®</sup> is in full compliance with all tests within AS 5062-2006



A high level of testing gives people the confidence in Muster<sup>®</sup>

- Operation test of manual actuators and manual pull stations
- Mounting device test
- Flow distribution
- 500 cycle operation test
- Hydrostatic pressure test
- Salt spray corrosion test
- Pneumatic operation test
- Pressure relief test
- Ageing test
- Temperature cycling test
- 30-Day elevated temperature test
- Calibration test
- Vibration test
- Blow off test
- Shock test
- Light and water test
- Exposure to extinguishing agent test
- Air oven aging test
- Burst strength test
- Nameplate exposure test

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*A Fire Suppression System designed to reduce risk by monitoring the full integrity of the fire system every second of the day.*

## Innovation

Transducer technology is supported by an Alarm Panel that monitors the nitrogen pressure and fire sensor integrity of the system every second. Muster<sup>II</sup> provides a system with either a fully monitored MusterWire LHD (Linear Heat Detection) fire sensing wire, or a fully monitored LOP system via an LOP pressure transducer, all in a small compact design. The new valve design also boasts the latest in recharge and discharge innovation. This assists the flow speeds through the valve, so a quick high pressure release can be achieved within a second from detection of fire.

## High Quality Components

Stainless steel components are used to ensure longevity and durability in harsh conditions culminating in a higher quality product with greater accuracy in performance. Constructed to AS 2470, the cylinders and brackets are 304 grade stainless steel including the ring neck, relief valve and handles, and completed in a UV stabilised powder coated finish. The Muster<sup>II</sup> fittings are also stainless steel; Nozzle fittings are available in a 90°, 45° and straight, for both inline and end of line connections and come complete with a stainless steel bracket and bolts.

## Versatility

All the electrical components are fully monitored and are easy to install. With quick connect wiring making installation simple, eliminating the need for an auto electrician. Muster<sup>II</sup> cylinder range comes in four sizes to suit your application. Nozzle assemblies are fully adjustable and can be configured to suit any application or positioning, and nozzles are available with 60° and 120° spray angles. The Alarm Panel is powered by a totally independent Lithium battery supply which can last up to 4 years; compact in size, comes with a universal mounting bracket with 360° rotation. Additionally the Alarm Panel has various shutdown options; instant, 6, 12, 18, 20, 24, 30 and 36 seconds.

## Asset Security

The Alarm Panel monitors the pressure in the cylinder valve and fire sensing every second. This informs the operator instantly if there is any detection of fire or a system integrity breach. A single action remote actuator can be used in intrinsically safe operations; with one swift motion the actuator can instigate the discharge process. New MusterCaps are moulded from a durable non hardening rubber based product; forming a flexible cap protecting the nozzle from contaminants and has a quick release feature. A high pitched 98db alarm built into the Alarm Panel warns the operator in the case of a fire.

## Asset Management

Risk Reduction through the 24/7 monitoring of the integrity of the Fire Suppression System ensuring it is ready to activate if fire present. The new Muster<sup>II</sup> system introduces a higher quality product with greater accuracy in performance. Data, telemetry and auxiliary options are available such as historical data download, audio and additional circuitry. Offering easy to maintain components for simple and efficient maintenance service. Muster<sup>II</sup> Agents complete a comprehensive training and accreditation process, this gives the operator and customer confidence in the best level of protection for their assets.

# APPLICATIONS

## Heavy Equipment System

The Heavy Equipment System (HES) has increased cylinder capacity for longer discharge. Commonly used in mining, the Muster<sup>®</sup> Fire Suppression System offers excellent asset management in the most demanding environments. With its high quality stainless steel; cylinders, cylinder mounts, fittings and nozzles, Muster<sup>®</sup> offers a high level of protection for high cost assets.

The HES has been designed to allow configurations to suit applications in a range of industries including:

- Surface and underground mining equipment including draglines, haul trucks, dozers, shovels and shuttle cars
- Construction equipment including bulldozers, excavators and graders
- Large forestry and agricultural equipment including loggers, loaders, harvesters and tractors
- Industrial equipment
- Large fixed mobile power generators and compressors
- Boats and heavy marine equipment
- Railway equipment and locomotives



Dump Truck



Mining Shovel



Forest Vehicle



Digger

## Medium Equipment System

Muster<sup>®</sup> has a flexible design, great for Medium Equipment Systems (MES). The quick connect wiring and the battery powered Alarm Panel can easily be installed in the dash or a wide variety of mounting angles using its 360° bracket. The system uses less wiring and components making it less obtrusive and more reliable.

The MES has been designed to allow configurations to suit applications in a range of industries including:

- Agricultural equipment
- Interstate and metro buses
- Small to medium size construction equipment
- Large forklifts
- Medium size commercial vehicles
- Wind farm turbines
- Prime movers



Sugar Harvester



Bus



Wind Farm Turbine



Large Forklift

## Light Equipment System

The Light Equipment System (LES) is designed to allow the installer to fit small, compact systems to important equipment. With smaller machines space is limited, so Muster<sup>®</sup> is engineered in stainless steel for light weight and durability. The system uses compact transducers removing the need for additional pressure switches.

The LES is designed to suit applications in a range of industries including:

- 4WD vehicles for mine sites
- Agricultural equipment
- Turbo charged 4WDs
- Medium commercial vehicles
- Small buses
- Small personnel transporters



Light 4WD Vehicles



Mini Bus



Small Forklifts



Off Road Buses

## FIRE SUPPRESSION SYSTEMS

*Heavy, mobile and stationary equipment represents a substantial investment for any business. Due to the often heavy demands placed on equipment performance, a significant consideration of risk for any operation today is damage to equipment or potential loss of life resulting from the ever-present risk of fire. Reality is that occasionally machines catch fire, and consideration must be given to the costs of machine replacement and lost production. These costs are however, insignificant compared to the loss of life.*

While there are a few common causes, it is worthwhile considering the options available to protect your investment in the case of such an event. The installation of a Fire Suppression System has now become an essential part of a company's overall risk management plan in order to minimise the risk to both operator and equipment.

JSG Industrial Systems now introduces innovation into the fire suppression market. Using latest technology for automatic detection and actuation; Muster<sup>®</sup> is an engineered system designed for environments where world leading performance is consistently demanded.

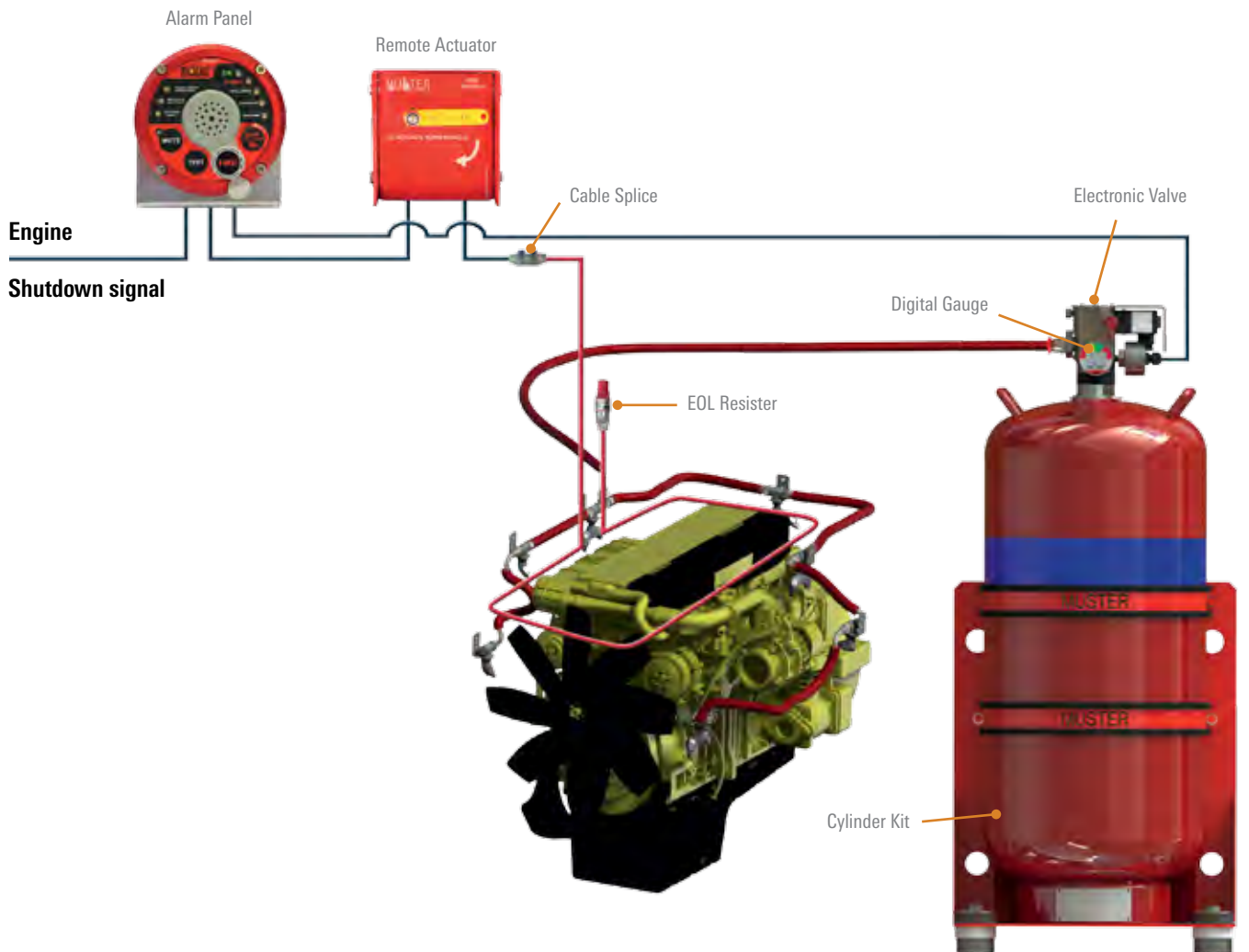
The supportive design program builds a visual image as you develop the Bill Of Materials. Every Muster<sup>®</sup> system comes with service sheets for the various components and contains a full service log

to ensure that the correct service is carried out, maintaining the integrity of the Muster<sup>®</sup> Fire Suppression System.

System design and installation is carried out by trained and qualified personnel. Every system design begins with a thorough risk assessment of the equipment to be protected. This ensures that all fuel and ignition sources are identified and assessed for protection, resulting in a more effective management of the asset and its fire risks.

Complete training is a pre-requisite to design, installation and service of the Muster<sup>®</sup> fire system. All authorised Muster<sup>®</sup> Distributors are trained and tested to ensure competency to deliver the correct system designs, installation and service capability of the entire range.





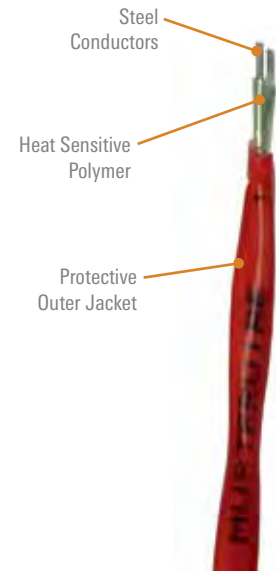
## Sensing System

The Muster<sup>®</sup> system has tri-system capability; MusterWire LHD, LOP electronic and LOP intrinsically safe. Each system uses automatic detection as their primary method of operation. Manual activation points are also incorporated into the build of fire suppression systems. Regardless of the type of actuation system you choose, the Muster<sup>®</sup> system uses fast and reliable sensing to best protect your assets.

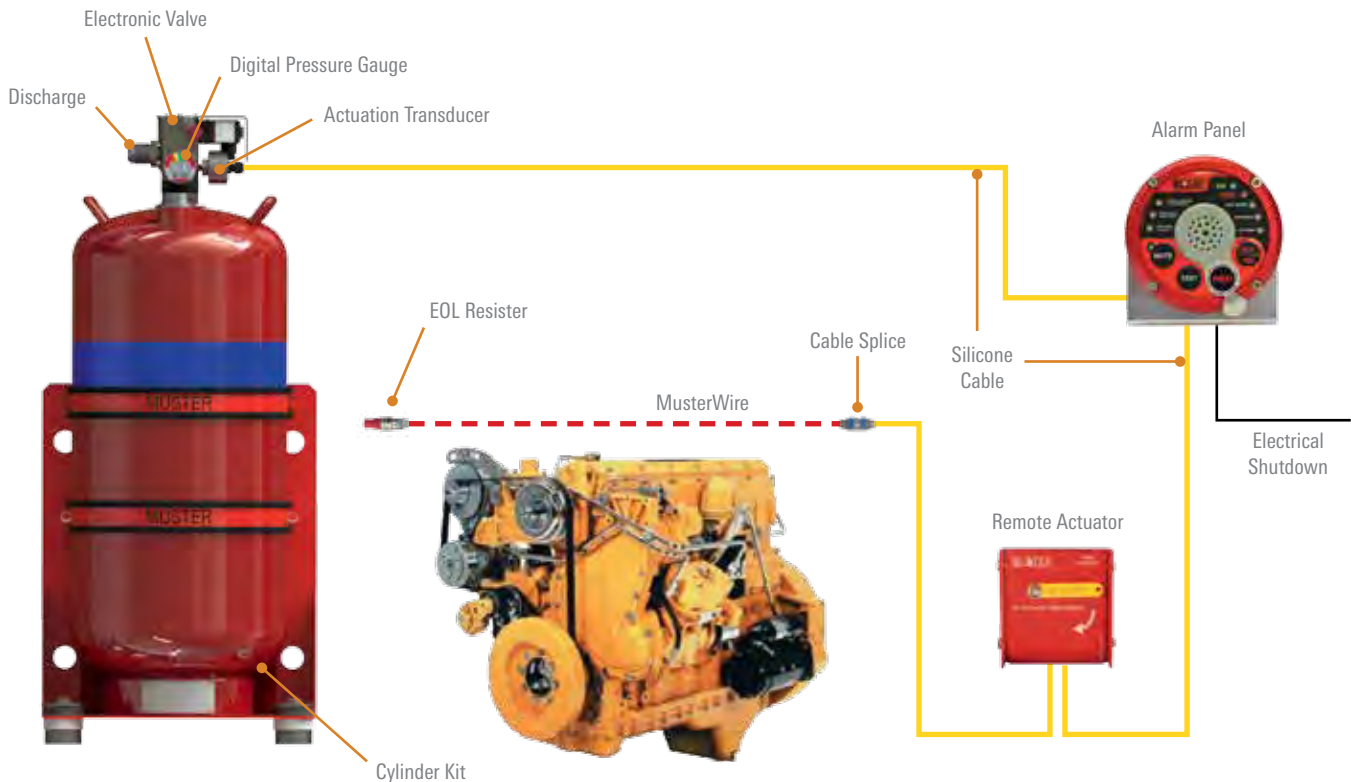
### 1. MusterWire Linear Heat Detection (LHD)

MusterWire uses Linear Heat Detection for fire sensing. The electrical wire can run throughout the engine bay, gear box, cable harness and other areas of high risk. It ensures a reliable fire suppression system by monitoring and reacting when exposed to high heat. MusterWire activates at 180°C, when the outer layer is subjected to heat it causes the twin steel conductors cores of the cable to touch, sending a signal directly back to the Alarm Panel. Detection is instant; giving the operator precious time to react.

- 24/7 sensing cylinder actuator monitoring
- 24/7 fire sensing monitoring
- Fully monitored by the Alarm Panel
- Reduces false discharge
- Fast signal reaction time
- Reliability
- Uses its own power source
- Very low 12 month periodic servicing cost
- Low cost to install due to easier installation process
- Electrical actuation circuit
- Digital pressure gauge



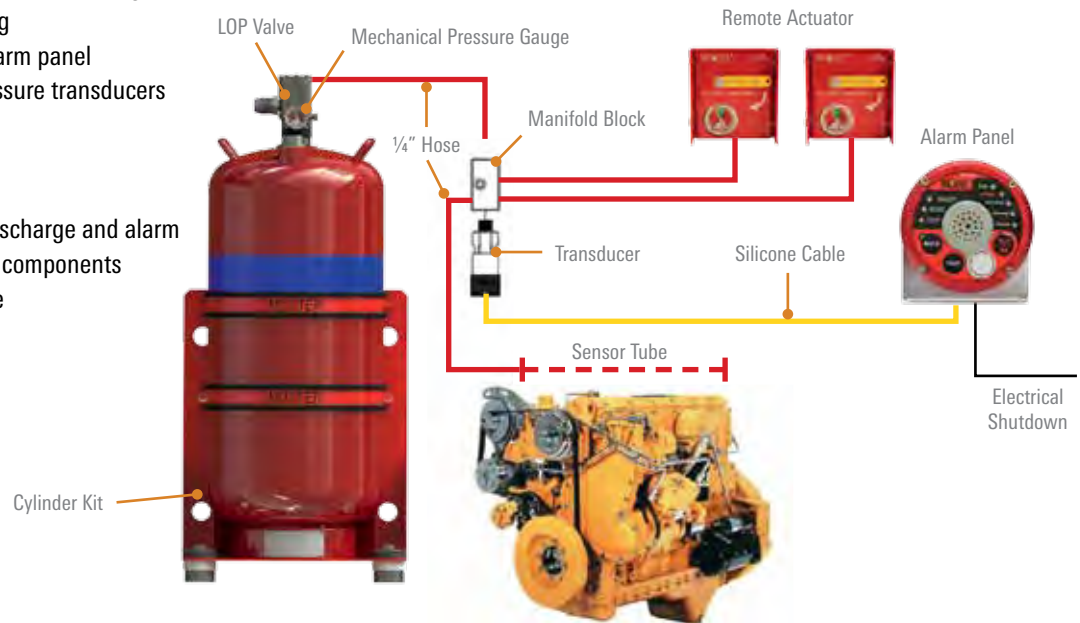
MusterWire



## 2.1. Loss of Pressure Detection (LOP)

Utilising a state of the art LOP pressure sensor transducer; the system updates the Alarm Panel with information every second. Pressurised tubing is strategically positioned above areas identified in the risk assessment. When the tubing is exposed to fire the rapid elevation in temperature causes the material to rupture. The resulting sudden release of pressure opens the actuation valve and releases the foam solution. The pressure drop in the system will then sets off the fire alarm.

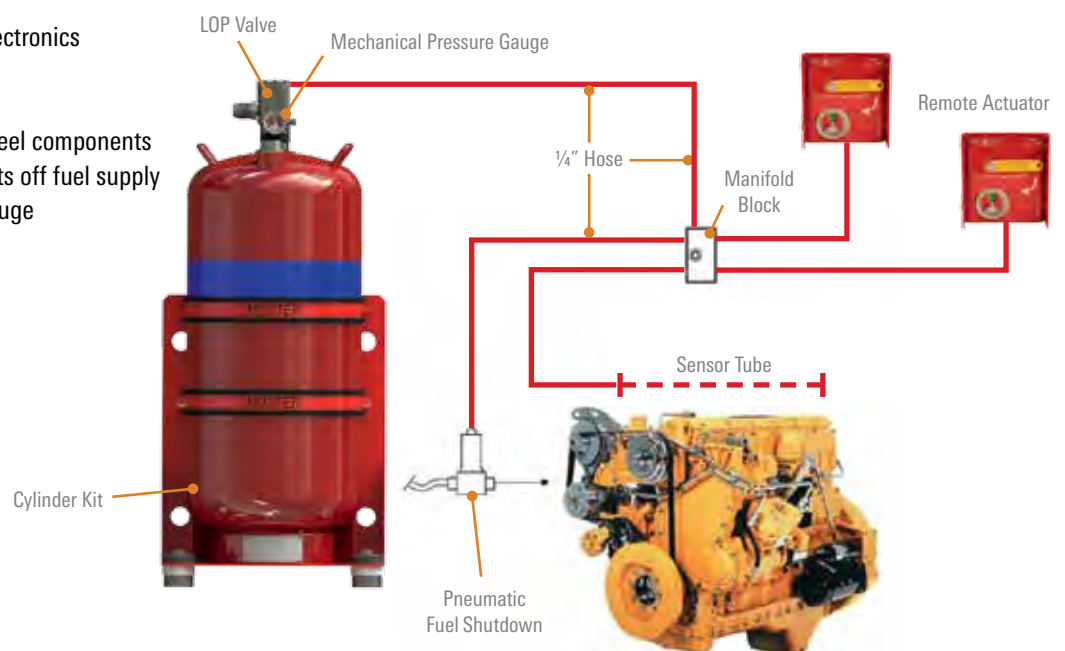
- 24/7 sensing cylinder actuator monitoring
- 24/7 fire sensing monitoring
- Is fully monitored by the alarm panel
- Utilises state of the art pressure transducers
- Reliability
- Fast manual actuation
- Uses its own power source
- Designed to reduce false discharge and alarm
- High quality stainless steel components
- Mechanical pressure gauge



## 2.2. Loss of Pressure Detection – Intrinsically Safe

Muster<sup>®</sup> also offers an intrinsically safe alternative for use in a range of applications such as underground mining, petro chemical etc. Incorporating nylon tube for fire detection, all the actuation components are pneumatically operated. This includes a pneumatic valve which is used to cut the fuel supply. A manually operated remote actuator has a swift single motion action, putting the system in the hands of the operator.

- Eliminates the use of electronics
- Fast manual activation
- Fuel cut off
- High quality stainless steel components
- Pneumatic solenoid shuts off fuel supply
- Mechanical pressure gauge



## System Types

### 1. Fire Detection System Only

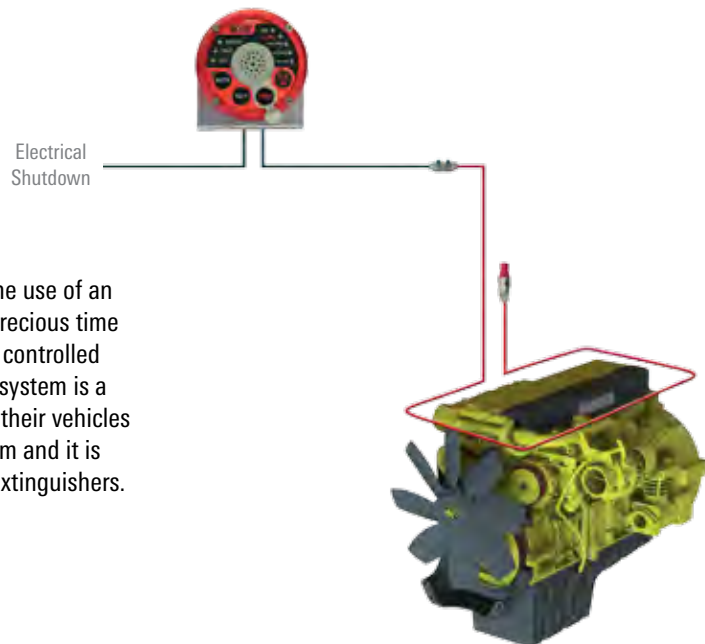
Compliant to AS 5062.2006, Section 5.2.5

Includes;

- Fire detectors
- Fire alarm
- Fire indicator panel

The fire detection system offers early detection through the use of an audible alarm and flashing light. This gives the operator precious time in the event of a fire to evacuate the vehicle in a safe and controlled manner. Commonly installed on buses; this fire detection system is a cost competitive option for operators who have identified their vehicles risk. This system does not have any fire suppression system and it is recommended to be used in conjunction with hand held extinguishers. Benefit of the system;

- 24/7 monitoring of the heat detection sensor
- Rapid detection of a fire
- Initiate an alarm signal
- Initiate safety functions
- Electrical shut down options



### 2. Manually Operated Fire Suppression System

Compliant to AS 5062.2006, Section 5.2.4

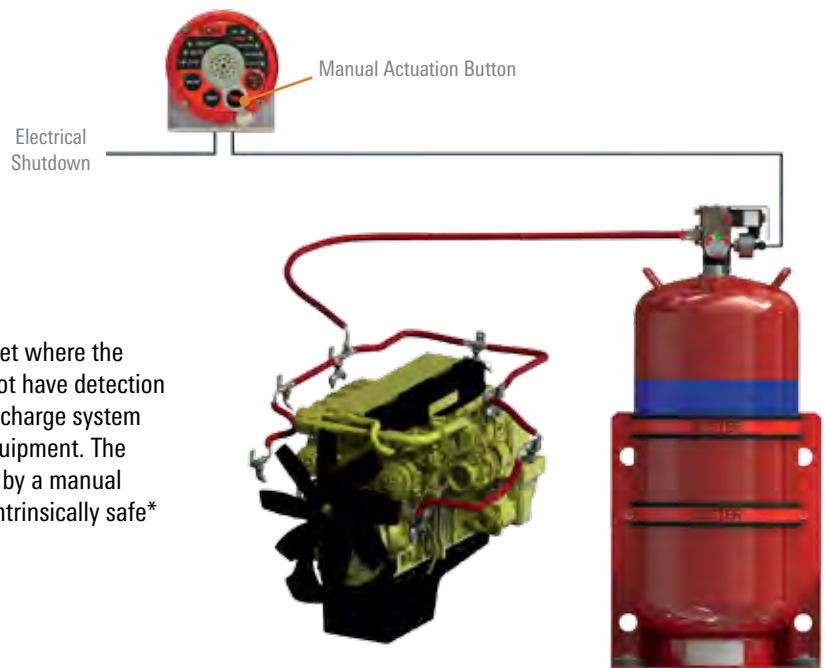
Includes;

- Manual actuating devices
- Fire extinguishing agent containers/cylinders
- Discharge pipe work and nozzles

The manually operated system is a solution for the market where the operator is in constant view of the risk area(s). It does not have detection devices in the circuit; however it uses an engineered discharge system that is designed specifically to reduce the risk on the equipment. The system consists on a cylinder and valve that is operated by a manual control station. This system can be either electronic or intrinsically safe\* dependant on the type of actuator used in the system.

Benefit of the system;

- 24/7 monitoring of the cylinder integrity
- Manual activation of discharging the extinguisher agent
- Provide a signal, or other indication, confirming agent discharge
- Electrical shut down options



Electronic option shown

Note: \*Intrinsically safe systems must use M2RA32 and M2VA32.

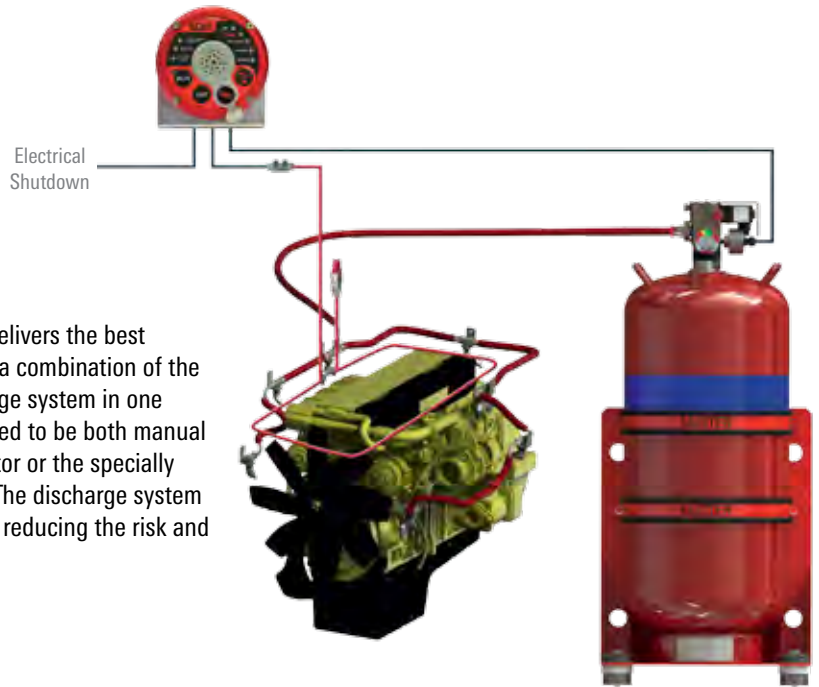
### 3. Fire Detection With Automatically or Manually Operated Fire suppression System

Compliant to AS 5062.2006, Section 5.2.3 & 5.2.2

Includes;

- Fire detectors
- Fire alarm
- Fire indicator panel
- Fire extinguishing agent containers
- Manual actuation devices
- Discharge pipe work and nozzles

This is an engineered fire suppression system which delivers the best results when it comes to risk reduction. The system is a combination of the first two systems offering; fire detection and a discharge system in one complete package. The fire detection system is designed to be both manual and automatically operated. This means that an operator or the specially designed fire sensing device can actuate the system. The discharge system is engineered to the machine with the sole purpose of reducing the risk and limiting the possibility for re-ignition.



Benefit of the system;

- Full 24/7 monitoring of the heat detection sensor and cylinder pressure
- Rapid detection of a fire
- Initiate an alarm signal
- Automatically activate discharge of extinguishing agent
- Manual activation of discharge and extinguishing agent
- Provide a signal or indication confirming agent discharge
- Initiate safety functions
- Electrical shut down options

The fire detection and suppression system is the most protection you can have.



# COMPONENTS

## Muster<sup>II</sup> Alarm Panel

The Muster<sup>II</sup> system uses one Alarm Panel that can be configured for either MusterWire (fire sensing wire) or an electric LOP sensing system. Small and compact in size it measures 97mm in diameter, making it easy to read but does not obstruct the view for the driver.

- Small and compact
- Powered by a totally independent battery supply which can last up to 4 years under normal use (low battery indicator illuminates when required)
- Universal mounting bracket with 360° rotation or can be mounted in the dash
- The shutdown panel has various shutdown options; instant, 6, 12, 18, 20, 24, 30 and 36 seconds
- Alarm Panel monitors the nitrogen pressure in the cylinder every second via the transducer assembly in the system. Programmed for instant override with discharge
- Alarm Panel monitors the integrity of the LHD sensor wire or LOP sensing to ensure ready to actuate
- Data, telemetry and auxiliary options available such as historical data (supported by battery with 10 year life) download, audio, additional circuit

### General Specifications

Size	O.D. 97mm x 60mm (d)
System type	LHD and LOP
Power	Isolated Li-Ion battery
Battery life	2 years under normal use
Alarm siren	97Db
Cable length	1 meter (Tagged)
Material	Hard anodised aluminium
Protection rating	IP66



MusterWire LHD Configuration



Loss Of Pressure Configuration

PART NO.	DESCRIPTION	COMMENTS
M2APK01	Alarm Panel kit	Alarm Panel kit consists of; Alarm Panel (with 1m cable and external data port), battery pack, 10m of 2 core silicone cable, Electronic and LOP actuation tags, 2mm stainless steel bracket with bolts, 10 cable splices, 4 heat shrinks and installation manual
M2AP01	Alarm Panel only	Includes panel and battery only



Alarm Panel Bracket



Fuse Pack



Battery Pack

### Alarm Panel Servicing

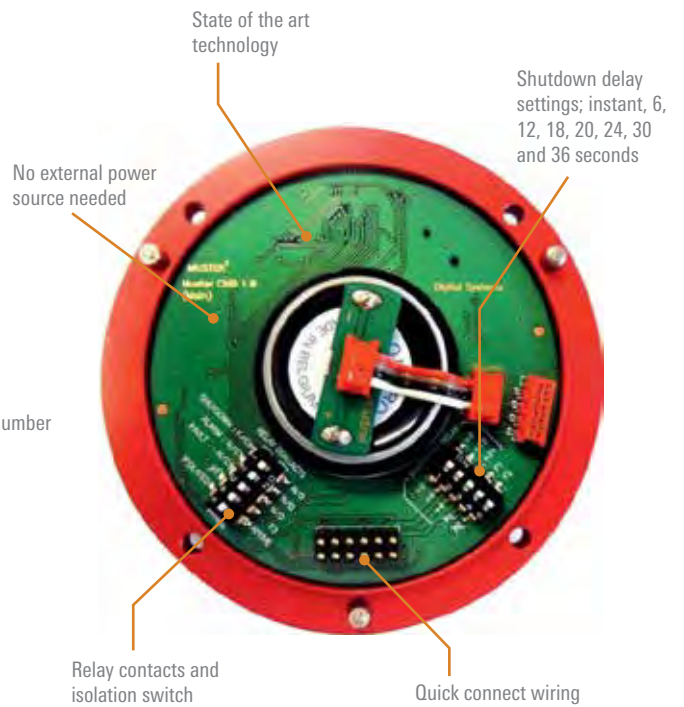
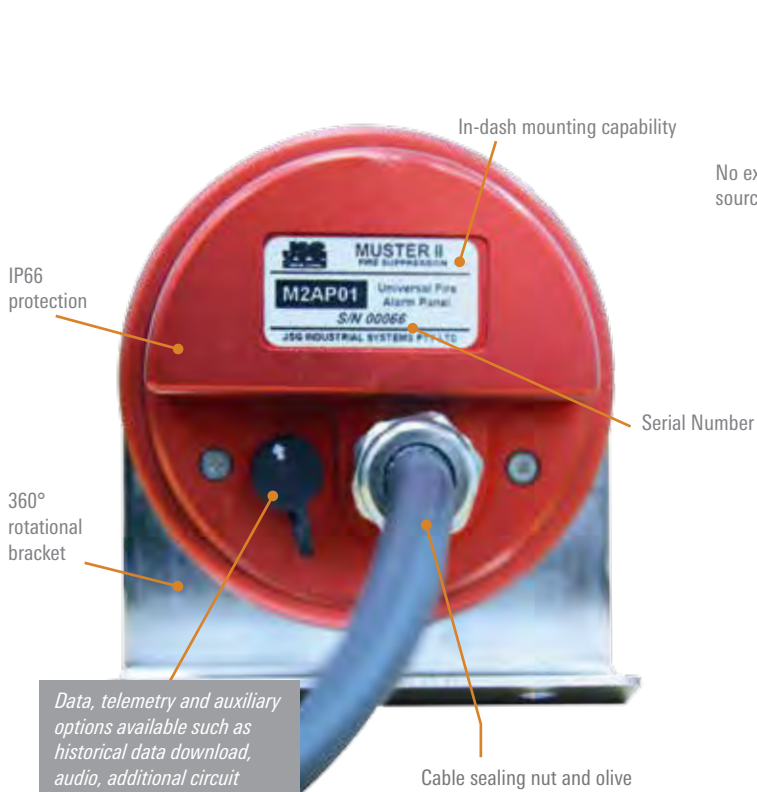
PART NO.	DESCRIPTION	COMMENTS
M2BP01	Battery pack	Long life non-recharging Lithium Ion
M2FP01	Fuse pack	2 Amp x 10 unit
M2AT01	Actuation tag, MusterWire	LHD configuration
M2AT02	Actuation tag, LOP	LOP configuration



MusterWire Tag



LOP Tag



Data Port for M2DM01 see page 16

## Muster<sup>®</sup> Diagnostic Module

The Muster<sup>®</sup> Diagnostic Module (M2DM01) features an easy to read LCD screen and simple to follow navigation. It will allow for fast and accurate monitoring of your Muster<sup>®</sup> Fire Suppression System.

Program features;

- Assists to pinpoint the system fault
- Assessment of system Pressure and Battery status
- Show detailed information on system faults
- Update the Alarm Panel software
- Program special functions to the Alarm Panel
- Change settings without disconnection from the system
- Download history and past events
- Reset and Isolate the Alarm Panel



### General Specifications

Size	45mm (w) x 85mm (h)
Power	Internal rechargeable battery
Screen	35mm x 25mm, backlit
Cable length	1m
Connector	3 pin plug
Charger adaptor	Female Mirco USB



Diagnostic Module

The Diagnostic Module is an important tool that can be used to save valuable time and will help the monitoring and the field servicing of a Muster<sup>®</sup> Fire Suppression System.

- Reset the Alarm Panel
- Isolate the system
- Test the battery
- Small and compact; connects directly to the rear of the Alarm Panel



Alarm Panel Connection Point

PART NO.	DESCRIPTION	COMMENTS
M2DM01	Alarm Panel Diagnostic Module	Includes connections to the Alarm Panel and PC
M2DEC01	Electrical bulkhead for Diagnostic Module	Used when the Alarm Panel is mounted in dash



Electrical Bulkhead

## Muster<sup>®</sup> Remote Actuators

Manual actuation is a process that puts the power into the hands of the operator. It is important for the operator to know where the manual activation panel is and how to use it. Muster<sup>®</sup> uses a small box with a single motion activator, in accordance to AS 5062 regulations. The fast actuation gives the operator and machine the best chance of a fast response and the best chances for protection.

- Fully monitored
- Powder coated housing
- Quicker and easier actuation mechanism
- Smaller footprint
- Stainless steel



### General Specifications

Height	60mm (w) x 120mm (h) x 120mm (d)	
Weight	1.8kg	(LOP)
	1.6kg	(LHD)
Gauge	Mechanical included	(LOP)
Material	Stainless Steel	
Operating temperature	-40°C to +80°C	
Operating pressure	13.7 bar	(LOP)
IP rating	IP66	
Connector thread	7/16" JIC M	

PART NO.	DESCRIPTION	COMMENTS
M2RA31	Remote actuator electronic	Includes 10m twin core cable
M2RA32	Remote actuator LOP	Includes calibrated mechanical gauge

### Remote Actuator Servicing

PART NO.	DESCRIPTION	COMMENTS
M2ST01	Security tie used with actuators	Used with actuators
M2L31	Replacement label	UV stabilised, suits both remote actuators



Electronic  
For use with MusterWire systems



Loss of Pressure  
For use with LOP systems

## Muster<sup>II</sup> Valve - Electronic Assembly (LHD)

The new Muster<sup>II</sup> valve design enables the valve to be configured for use with MusterWire fire sensing wire system. Using state of the art transducer technology located within the valve provides continued monitoring of the cylinder pressure and feeds that information back to the Alarm Panel.

- Locking pins for directional adjustment
- Interchangeable adapter nut to suit a range of neck rings
- Viton O-rings to ensure a quality seal and long life
- Schrader valve for fast refilling
- Stainless steel guard protects the solenoid
- Includes highly accurate digital pressure gauge

### General Specifications

Height	120mm (w) x 120mm (h) x 120mm (d)
Weight	2.6kg
Gauge	Digital included
Material	Stainless Steel
Operating temperature	-40°C to +80°C
Operating pressure	13.7 bar
IP rating	IP66
Fill point thread	7/16" JIC M
Fill adjustment	Schrader valve
O-ring material	Viton

PART NO.	DESCRIPTION	COMMENTS
M2VA31	Valve electronic assembly	Includes solenoid valve, digital pressure gauge M2PG01 and valve nipple M2VN32 (22mm to 1 1/16" JIC M)
M2VA33	Low temperature electronic valve	

*Note: For smaller systems valve nipple M2VN31 (22mm to 3/4" JIC M)*

## NEW DESIGN

MARK II



Rest Position of Piston



Active Position of Piston

## Muster<sup>®</sup> Valve - LOP Assembly

This is the valve for LOP actuation using the benefits of the LOP pressure sensor. For existing users of LOP systems, Muster<sup>®</sup> can provide a fully monitored LOP system using the Muster<sup>®</sup> LOP pressure sensor. The LOP system uses the Muster<sup>®</sup> electronic Alarm Panel.

- Locking pins for directional adjustment
- Interchangeable adapter nut
- Nylon tubing is used for the automatic detection
- Viton O-rings to ensure a quality seal and long life
- Schrader valve for fast refilling
- Optional upgrade to a highly accurate digital gauge
- Includes highly accurate calibrated mechanical pressure gauge

### General Specifications

Height	60mm (w) x 120mm (h) x 120mm (d)
Weight	1.8kg
Gauge	Mechanical included
Material	Stainless Steel
Operating temperature	-40°C to +80°C
Operating pressure	13.7 bar
IP rating	IP66
Fill point thread	7/16" JIC M
Fill adjustment	Schrader valve
O-ring material	Viton

PART NO.	DESCRIPTION	COMMENTS
M2VA32	Valve LOP assembly	Includes mechanical pressure gauge M2PG02 and valve nipple M2VN32 (22mm to 1 1/16" JIC M)

*Note: For smaller systems valve nipple M2VN31 (22mm to 3/4" JIC M)*

**NEW DESIGN**  
MARK II



Rest Position of Piston



Active Position of Piston

## Valve Servicing

In the event that you need to service either of the two Muster<sup>®</sup> valves, there are a range of service items available to you.

Featuring;

- O-ring service kit which includes high performance silicone grease
- MusterSeal has been designed specifically for stainless to stainless bonding
- Stainless steel replacement outlet nipples

PART NO.	DESCRIPTION	COMMENTS
M20K31	O-ring kit for valve assemblies	Includes tool, silicone O-ring grease suits M2VA31, M2VA32, M2VA33
M2VN31	Nipple for discharge outlet	3/4" JIC M x 22mm M
M2VN32	Nipple for discharge outlet	1 1/16" JIC M x 22mm M
M2TS01	MusterSeal	25ml tube
M2TA31	Transducer Assembly	Electronic valve only



MusterSeal



Discharge Outlet Nipples



O-ring Kit for Valve Assemblies

## Muster<sup>®</sup> Pressure Gauge Options

The Muster<sup>®</sup> system offers two types of pressure gauges; digital or mechanical. The digital gauge is electronic and comes with its own battery power supply. The digital gauge has a greater range of measurement allowing for more accurate cylinder pressure within 0.1% utilising state of the art transducer technology. The mechanical gauge is to assist with cold climates and underground mining applications.

Digital gauge features;

- Sealed and durable housing
- 1/8" BSP rear entry thread
- +/- 0.1 accuracy
- Fully enclosed stainless steel housing

PART NO.	DESCRIPTION	COMMENTS
M2PGR01	Pressure gauge digital	Calibrated, and tested
M2PGR02	Pressure gauge mechanical	Calibrated, and tested



Digital



Mechanical

## Muster<sup>®</sup> Actuation Components

A complete range of actuation components are available. Manifold block and fire sensing tube are available for LOP. Twin core silicone cable and connectors for electrical systems are all readily available. The LOP transducer assembly converts the air pressure in the fire sensor tube to an electronic signal. This is then sent to the Remote Actuator or Alarm Panel, reducing the length of air filled tube that is needed by the system.

- Quick and precise electrical connections
- Easy to order kits
- Stainless steel manifold block

### LHD Actuation Components

PART NO.	DESCRIPTION	COMMENTS
M2FW01	MusterWire kit 10m	Includes end of line resistor 2 cable splices, heat shrink and 10m of MusterWire
M2FW02	MusterWire kit 20m	Includes end of line resistor 2 cable splices, heat shrink and 20m of MusterWire
M2SC101	Silicone cable 2 core 10m	Includes joiner plugs and 200mm heat shrink
M2SC102	Silicone cable 2 core 20m	Includes joiner plugs and 200mm heat shrink
M2CG01	Cable gland	Bulkhead used with silicone cable for cab entry
M2RP01	Resister plug	End of line resistor used with MusterWire silicone cable
M2CP01	Connector kit	Includes connector plugs and 200mm heat shrink

### LOP Actuation Components

PART NO.	DESCRIPTION	COMMENTS
M2MB01	Manifold block 6 port	Used for LOP
M2TA02	Transducer assembly for LOP systems	Monitors system pressure
M2PV01	Pneumatic fuel cut off	Used in intrinsically safe systems
M2STK01	Fire sensor tube kit 4m	Includes terminal S/S fittings, nipples, plugs and 4m of sensor tube
M2STK02	Fire sensor tube kit 8m	Includes terminal S/S fittings, nipples, plugs and 8m of sensor tube



MusterWire



Silicone Cable



Resister Plug



Fire Sensor Tube



Manifold Block



Transducer Assembly

## Muster<sup>II</sup> Cylinders

Stainless steel components have been used to ensure longevity and durability in harsh conditions, culminating in a high quality product with greater accuracy in performance. Constructed to AS 2470, the cylinders and brackets are made from 304 grade stainless steel including; the ring neck, relief valve and handles, and completed in a UV stabilised powder coated finish.

- Cylinders are manufactured in stainless steel and externally powder coated
- Each cylinder incorporates a stainless steel filler plug and a safety relief valve
- Cylinder assemblies use flexible pick-up tubes to allow the cylinders to be mounted from a 45° angle to vertical
- Heavy duty welded stainless steel cylinder brackets have been designed to integrate with the cylinder to minimize space usage
- The robust base plate has been designed for compactness and provides the smallest footprint possible
- Vibration eliminators are available for applications where cylinder assemblies are subject to continuous movement or vibration
- Silicone liner on the mounting brackets to control vibration



## Cylinder Kits

PART NO.	DESCRIPTION	STRAPS	COMMENTS
M2CK022	Cylinder set 22L	1	Includes 1 x Bracket, 1 x Pick up hose, 1 x Cylinder label, 1 x Safety relief valve and 1 x Cylinder filling manual
M2CK038	Cylinder set 38L	2	
M2CK066	Cylinder set 66L	2	
M2CK110	Cylinder set 110L	2	

*Note: Valve vibration eliminators and the foam are to be ordered separately. See page 24.*



Cylinder Set

## Cylinder Servicing

The filling tube is a newly designed tool to ensure the highest degree of constant accuracy when filling the cylinders. All 4 cylinders are covered with a simple and easy locking adjustment. The tube is finished in a hard anodised finish to protect it in harsh environments.

PART NO.	DESCRIPTION	COMMENTS
M2CR01	Cylinder charging kit	Cylinder commissioning. Includes hard case, harris 825 N2 regulator, 15m and 1m x 1/4" hose, ball valve, pressure gauge, type 51 nitrogen adaptor and other required adaptors
M2FT01	Filling tube	Used with cylinders
M2TT01	Date test tag	Metal
M2SR01	Metal split security ring	Used with date tag
M2SP01	Service punch	Maintenance punch (numbered 1 to 5)
M2SR01	Date tag split ring	Maintenance date tag, split ring to secure tag



Cylinder Charging Kit

See page 33 for replacement labels.



Filling Tube



Date Test Tag

## Cylinder Capacities

PART NO.	DESCRIPTION	TOTAL VOLUME	HEIGHT (MM)	DIAMETER (MM)
M2C022	Cylinder only	22L	489	290
M2C038	Cylinder only	38L	750	290
M2C066	Cylinder only	66L	760	380
M2C110	Cylinder only	110L	1100	380



22L



38L



66L



110L

## Cylinder Accessories

PART NO.	DESCRIPTION	COMMENTS
M2CB02238	Bracket for 22L and 38L cylinder	Stainless steel
M2CB66110	Bracket for 66L and 110L cylinders	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2CS01	Strap for 22L and 38L bracket	Stainless steel
M2CS02	Strap for 66L and 110L bracket	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2VE34	Vibration eliminator assembly 34mm	High density rubber
M2VM50	Vibration eliminator weld mount 50mm	Mild steel

PART NO.	DESCRIPTION	COMMENTS
M2PU022	Pick up hose	Suits 22L cylinder
M2PU038	Pick up hose	Suits 38L cylinder
M2PU066	Pick up hose	Suits 66L cylinder
M2PU110	Pick up hose	Suits 110L cylinder

PART NO.	DESCRIPTION	COMMENTS
M2SRVP	Safety relief valve complete	Includes fill plug
M2SRVC	Safety relief cover	Lexan sticker



Pick Up Hoses



Cylinder Bracket



Cylinder Straps



Vibration Eliminator



Weld Mount



Safety Release Valve

## Valve Mounting Options

Muster<sup>®</sup> introduces great versatility with a range of optional cylinder adaptor nuts. Designed to suit a range of cylinders, the adaptors will suit most brands on the market.

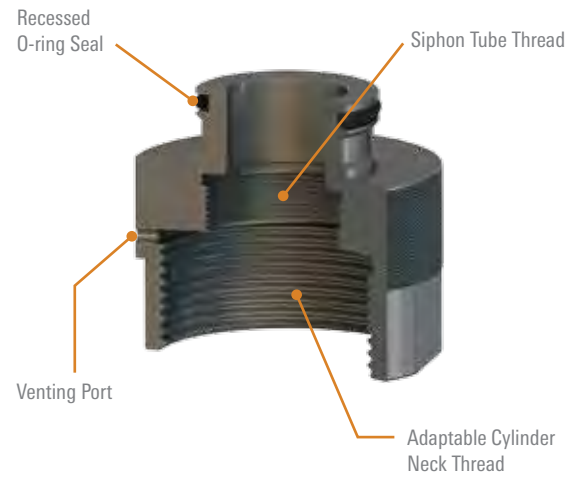
- Stainless steel
- Used to upgrade existing systems after a compliant Risk assessment process
- 7 types available

Suits M2VA31 and M2VA32

PART NO.	DESCRIPTION	COMMENTS
M2CA31	Cylinder adaptor	Suitable for Muster <sup>®</sup>
M2CA32	Cylinder adaptor	Suitable for Wormald
M2CA33	Cylinder adaptor	Suitable for FSI
M2CA34	Cylinder adaptor	Suitable for ETI 38mm
M2CA35	Cylinder adaptor	Suitable for ETI 32mm
M2CA36	Cylinder adaptor	Suitable for Chubb/Qtec/BFI (Stryker)
M2CA37	Cylinder adaptor	Suitable for Sandvik



Cylinder Adaptor  
SN. > 600

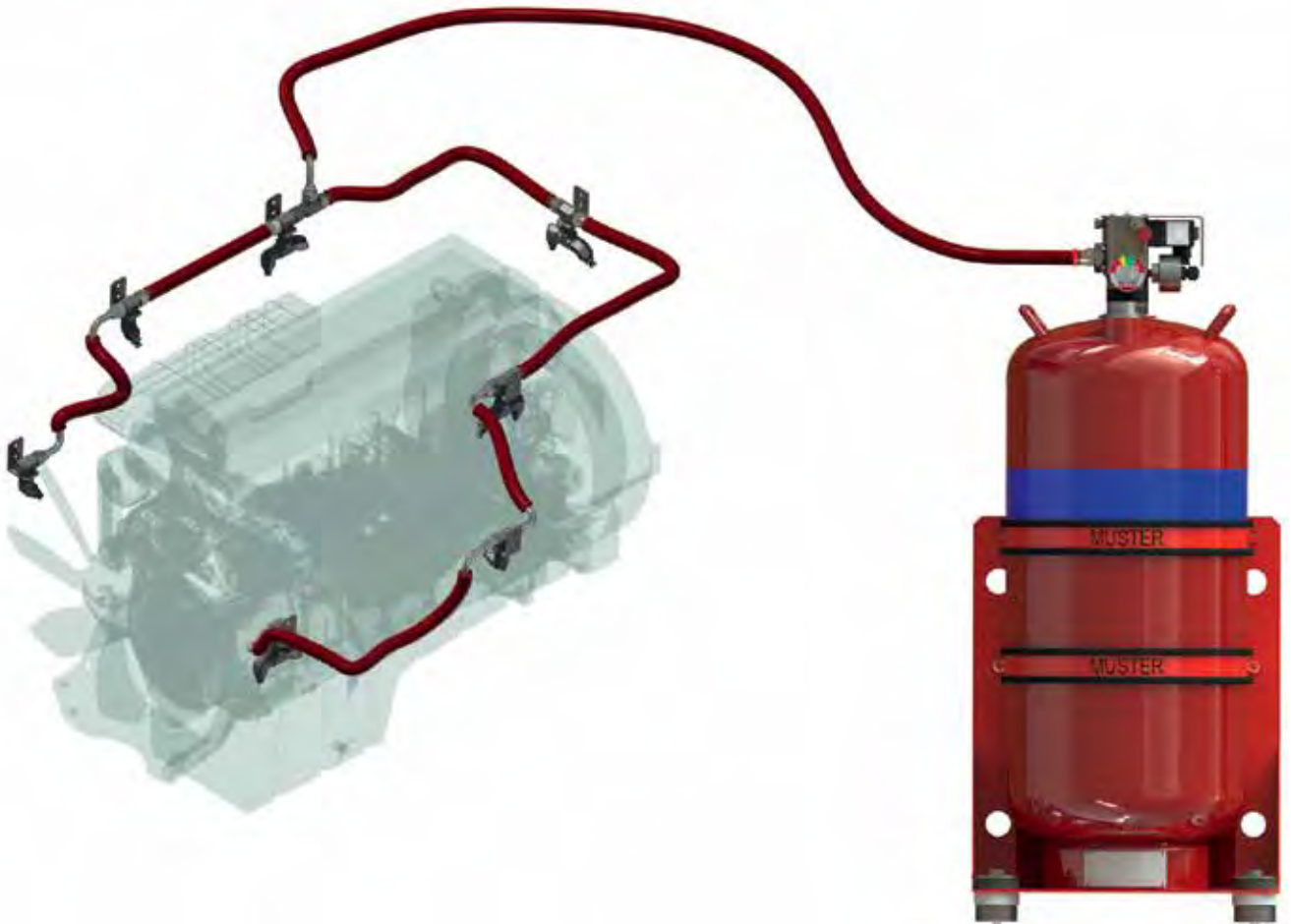


## Foam Discharge System

The Muster<sup>®</sup> Foam Fire Suppression System is a specialised foam-based fire suppression system designed to suit all mobile and stationary equipment including mining haul trucks, draglines, dozers, shovels, excavators, loaders, harvesters, generators, road transport vehicles and industrial equipment.

Foam offers several advantages in the suppression of fires:

- Foam forms a film on top of the fuel surface creating a vapour seal, denying oxygen to the fuel surface
- Foam provides a cooling effect and aids in preventing re-ignition
- Foam is able to flow under gravity to follow and cover fuel spills
- The use of foam avoids powder compaction problems, due to vibration that are commonly associated with Dry Chemical Powder (DCP) systems
- Longer discharge times are possible using foam
- Foam is not hazardous to personnel and unlike powder does not pose a respiratory hazard
- Foam is highly effective in suppressing Class A and B fires while being Environmentally friendly. AFFF is biodegradable and has a negligible impact for nutrient loading
- Special foam solution designed to operate in extreme cold temperatures, down to -40°C



## Muster<sup>®</sup> Standard Foam

The Foam Fire Suppression System utilises high grade AFFF at a 1% concentrate. AFFF is the leading agent used to fight large Class B (diesel and oils) flammable liquid fires and is used throughout the world typically in oil refineries, oil tank storage facilities, diesel depots and mobile applications. With a 99% water composition, AFFF is also effective in controlling both Class A fires (normal combustibles, wood, plastic, paper etc.) and Class B fires (Diesel, Oils, etc.).

- Sold as a concentrate
- Packaging designed by cylinder size
- Capable of suppressing a range of fire classes



PART NO.	DESCRIPTION	SIZE	COMMENTS
M2SFC022	Standard foam	176ml	Suits 22L cylinder
M2SFC038	Standard foam	304ml	Suits 38L cylinder
M2SFC066	Standard foam	528ml	Suits 66L cylinder
M2SFC110	Standard foam	880ml	Suits 110L cylinder
M2SFB005	Standard foam	5L	Must be measured when filling
M2SFB025	Standard foam	25L	Must be measured when filling
M2SFB200	Standard foam	200L	Must be measured when filling

Foam concentrate safety data sheets are available at [www.musterfire.com](http://www.musterfire.com)

## Muster<sup>®</sup> Advanced Agent

Advanced Agent is designed to be used in the most challenging of environments. With its low temperature rating to -40°C, Advanced Agent comes in a 100% ready to use formula removing the need for mixing.

- Ready to use
- Low operating temperatures
- Superior level of protection

PART NO.	DESCRIPTION	SIZE	COMMENTS
M2AFB005	Advanced agent	5L	Do not mix with water
M2AFB020	Advanced agent	20L	Do not mix with water



## Muster<sup>®</sup> Nozzle Assemblies

The range of nozzle assemblies are fully adjustable and can be configured to suit a variety of applications and environments. They can easily be positioned and angled to maximise their effectiveness. High quality stainless steel fittings come complete with a stainless steel mounting bracket.

- Stainless steel construction
- Inline and end of line available
- Easy to position

*Note: Nozzle type to be ordered separately. Mounting bracket and bolts included.*



### General Specifications

Dimensions	50mm (w) x 80mm (h)	Single
	110mm (w) x 80mm (h)	Twin
Weight	400g including bracket	Single
	600g including bracket	Twin
Inlet thread	3/4" JIC M	
Output thread	1/4" BSP F	
Material	Stainless Steel 304	
Locking nut spanner	7/8"	
Nozzle hole	18mm	
Mount holes	1 x 10mm and 1 x 8mm	

### End of Line Fittings

PART NO.	DESCRIPTION	COMMENTS
M2BA02	Twin mount assembly	Tee, 45° and 90° included
M2BA04	Single mount assembly	45° and 90° included

### Inline Fittings

PART NO.	DESCRIPTION	COMMENTS
M2BA01	Twin mount assembly	Tee, 45° and 90° included
M2BA03	Single mount assembly	45° and 90° included



Nozzle Bracket

Weld mount for nozzle assemblies



M2WM01



End of Line Twin



End of Line Single



Inline Twin



Inline Single

## Muster<sup>®</sup> Nozzles

Key to a fire systems effectiveness are the discharge nozzles. Nozzles must be protected to reduce the chance of contaminants. Muster<sup>®</sup> nozzles come with the new high tech MusterCaps offering a tight tongue and groove seal on the nozzle face reducing the chance of the cap vibrating off and quick release feature that ensures the nozzle ejects the cap fast and effectively.

- Machined stainless steel
- Choice of either 60° or 120° spray patterns
- Durable and soft nozzle caps with quick release feature

### General Specifications

Dimensions	L24.8mm – Hex 14mm
Weight	50g
Material	Stainless Steel
Spray orifice	2.6mm
Nozzle core	Helixed
Thread	1/4" BSP M
MusterCap	Included on all nozzles

PART NO.	DESCRIPTION	COMMENTS
M2NA01	Nozzle 120° spray pattern	Stainless steel, includes cap
M2NA02	Nozzle 60° spray pattern	Stainless steel, includes cap
M2NC01	MusterCap	Includes lanyard



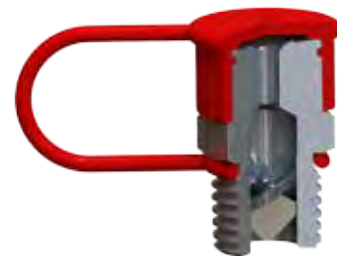
MusterCap



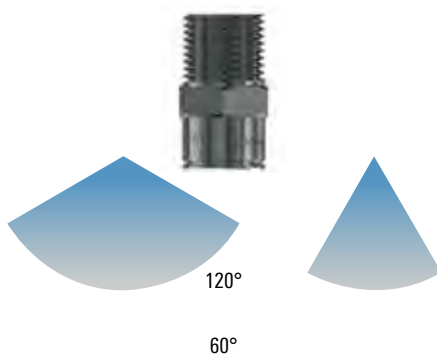
120° Nozzle



60° Nozzle



Internal Helix



Spray Angle



Solid Spray Pattern

## Fittings

All standard fittings such as nipples, adaptors are stainless steel to ensure durability in harsh working environments.

- Quality steel
- Precision made
- Comprehensive range available

PART NO.	DESCRIPTION	COMMENTS
M2BH01	Bulkhead 7/16" JIC M	Stainless steel
M2BH02	Bulkhead 3/4" JIC M	Stainless steel
M2BH03	Bulkhead 1 1/16" JIC M	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2NP0207	Nipple 1/8" BSP M x 7/16" JIC M	Stainless steel
M2NP0407	Nipple 1/4" BSP M x 7/16" JIC M	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2PL02	Plug 1/8" BSP M	Stainless steel
M2PL04	Plug 1/4" BSP M	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2T07	Tee 7/16" JIC M-F-M	Stainless steel
M2MT01	Tee 3/4" JIC M-F-M	Stainless steel
M2MT02	Tee 1 1/16" JIC M, 3/4" JIC F-M	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2E01	Elbow 45° 1/4" BSP M/F	Stainless steel
M2E02	Elbow 90° 1/4" BSP M/F	Stainless steel

PART NO.	DESCRIPTION	COMMENTS
M2G01	Grommet red silicone 2mm	Holds MusterWire use with M2PC02, P clamps
M2G02	Grommet red silicone 5mm	Holds MusterWire use with M2PC02, P clamps



Bulkhead



Nipple



Plug



Tee



Elbow



Grommet

## Hose

Muster<sup>®</sup> hoses are available in 3/4", 1/2" and 1/4" diameters. Smooth covered, with a natural and synthetic rubber which is abrasion, ozone and weather resistant. Red in colour, hoses are temperature rated to -40°C to +100°C.

- MSHA approved hose
- High tensile braid material
- Bright red colour for easy identification in the engine bay



PART NO.	DESCRIPTION	COMMENTS
M2SH01	Red hose 1/4" I.D. (wire)	MSHA Approved
M2SH02	Red hose 1/2" I.D. (fabric)	MSHA Approved
M2SH03	Red hose 3/4" I.D. (fabric)	MSHA Approved
M2SW01	Red spiral wrap for 1/4" hose	Sold per meter
M2SW02	Red spiral wrap for 1/2" hose	Sold per meter
M2SW03	Red Spiral wrap for 3/4" hose	Sold per meter



Hose



Spiral Wrap

## Hose Fittings

Special 3/4" and 1/2" push on hose fittings speed up the installation process. Strong barbs remove the need to crimp the hose, assembly can be done on the machine.

- Straight or 90° fitting types available
- Removes the need for a hose crimp



1/2" Straight Hose Tail

PART NO.	DESCRIPTION	COMMENTS
M2HTS01	Straight, hose tail, suits 1/4" hose	7/16" JIC F
M2HTS02	90°, hose tail, suits 1/4" hose	7/16" JIC F
M2HTP03	Straight, push on hose tail, suits 1/2" hose	3/4" JIC F
M2HTP04	90°, push on hose tail, suits 1/2" hose	3/4" JIC F
M2HTP05	Straight, push on hose tail, suits 3/4" hose	1 1/16" JIC F
M2HTP06	90°, push on hose tail, suits 3/4" hose	1 1/16" JIC F



1/2" 90° Hose Tail

## Tube and Tube Fittings

To improve installation time the stainless steel tube does not require flaring. Instead Muster<sup>ll</sup> uses a compression sleeve fitting; the nut and olive are also made from stainless steel eliminating oxidation which can happen with brass.

- Stainless steel
- 304 grade tube, olive and nut
- Removes the need for flaring

PART NO.	DESCRIPTION	COMMENTS
M2SST01	Tube 12.7mm x 2m annealed	Stainless steel
M2SST02	Compression nut for tube	Stainless steel 3/4" JIC F, includes olive



Tube



Nut and Olive

## Clamp and Ties

To assist the installation process, Muster<sup>ll</sup> includes a range of quality ties and clamps. These can be used to keep hoses and cables out of harm's way.

- Stainless steel P clamps
- Strong durable nylon cable ties
- Three convenient lengths

PART NO.	DESCRIPTION	COMMENTS
M2CT01	Cable ties 200 x 4.8mm	UV stabilised hi temp
M2CT02	Cable ties 370 x 4.8mm	UV stabilised hi temp
M2CT03	Cable ties 380 x 7.6mm	UV stabilised hi temp



Cable Ties

PART NO.	DESCRIPTION	COMMENTS
M2PC01	P clamp	Suits 1/4" hose, resister and joiner plugs M8 mounting hole stainless steel
M2PC02	P clamp	Suits 1/2" hose, grommets for MusterWire M8 mounting hole stainless steel
M2PC03	P clamp	Suits 3/4" hose M8 mounting hole stainless steel



P Clamp

PART NO.	DESCRIPTION	COMMENTS
M2SC01	Support clamp	Suits 1/4" hose and 12.7mm stainless steel tube
M2SC02	Support clamp	Suits 1/2" hose
M2SC03	Support clamp	Suits 3/4" hose



Support Clamp

## Muster<sup>II</sup> Labels

A range of replacement labels for cylinders and actuators are readily available. It is important to inspect the tags and labels ensuring all are clearly identifiable during system inspection.

- UV stabilised
- Peel off numbers for shutdown time frame
- Part numbers printed on labels for easy reordering

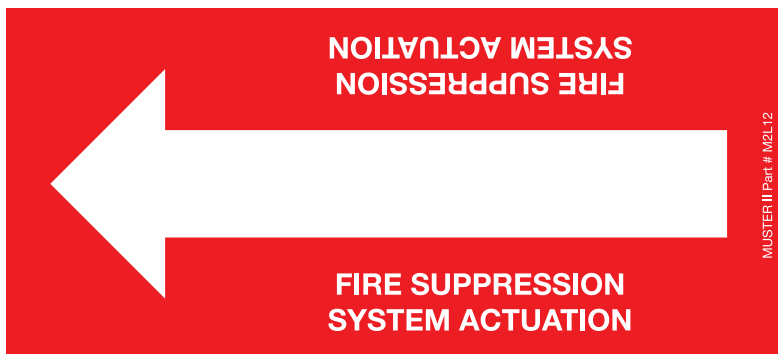
PART NO.	DESCRIPTION	COMMENTS
M2L09	'In the Event of a Fire' – small	UV stabilised
M2L10	'Warning' – small	UV stabilised
M2L11	'Warning' – large	UV stabilised
M2L12	Remote actuator location arrow	UV stabilised and reflective
M2CL01	Cylinder label 22L	UV stabilised
M2CL02	Cylinder label 38L	UV stabilised
M2CL04	Cylinder label 66L	UV stabilised
M2CL06	Cylinder label 110L	UV stabilised



'In the Event of a Fire' Label



Small 'Warning' Label  
 (Peel off numbers included with the shut down times)



Remote Actuator Location Arrow Label



Large 'Warning' Label



Cylinder Label

# MUSTER<sup>II</sup> SYSTEM - SERVICE SUPPORT

## Muster<sup>II</sup> Accreditation

All system design and installation is carried out by trained and qualified personnel. Every system design begins with a thorough risk assessment of the equipment to be protected. Ensuring that all fuel and ignition sources are identified and assessed for protection. The end result of which is a more effective management of fire risks. It is a requirement of JSG Industrial Systems for our System Houses (distributors) personnel before they design, install or service the fire systems that they are trained and must pass competency tests to verify this capability to deliver the correct design, installation and service.

Muster Agents have access to:

- Training
- Fully monitored system design
- Technical support
- Risk Assessments
- Service log templates



*The Muster<sup>II</sup> accreditation process and fire suppression system's holistic approach, gives the customer confidence; in their contractors, asset management and security.*

*Ensure Muster<sup>II</sup> Systems are installed and serviced by companies displaying this shield.*

## Muster<sup>II</sup> Design Program

The brand new Design Program uses the same high level of technology as the Muster<sup>II</sup> Fire Suppression System. It has a host of great features that are easy to use and assist the development of an accurate system. The program is fully monitored and tracked, and with regular automatic updates, the design templates will continue to grow when new machines are introduced. Once a template has been certified it will be available to all accredited Muster Agents as a guide, allowing them to modify rather than creating from scratch. Another great feature of the design program is the imagery, giving the user the ability to watch their system schematic grow as each part is selected.

- Accurate predictability discharge times
- Template loading feature
- Complete bill of materials
- Risk assessment creation



## Inspection and Testing Schedule Forms

To maintain the Fire System's integrity, and comply with AS 5062-2006; correct installation commissioning, regular servicing must be conducted and logged. The forms are readily available on the website and design to assist the control and processing on the equipment. Below is a list of the forms that are readily available.

- Daily Service Check
- Periodic Inspection
- Annual Testing Schedules
- Commissioning & Installation Report

The Daily Service Check form is a vertical document with the MUSTER logo at the top. It contains several sections for recording service details, including a large table with multiple columns and rows for logging individual checks or components.

Daily Service Check

The Periodic Inspection form is a vertical document with the MUSTER logo at the top. It features a detailed table for recording inspection results, with columns for various system components and rows for different inspection points or dates.

Periodic Inspection

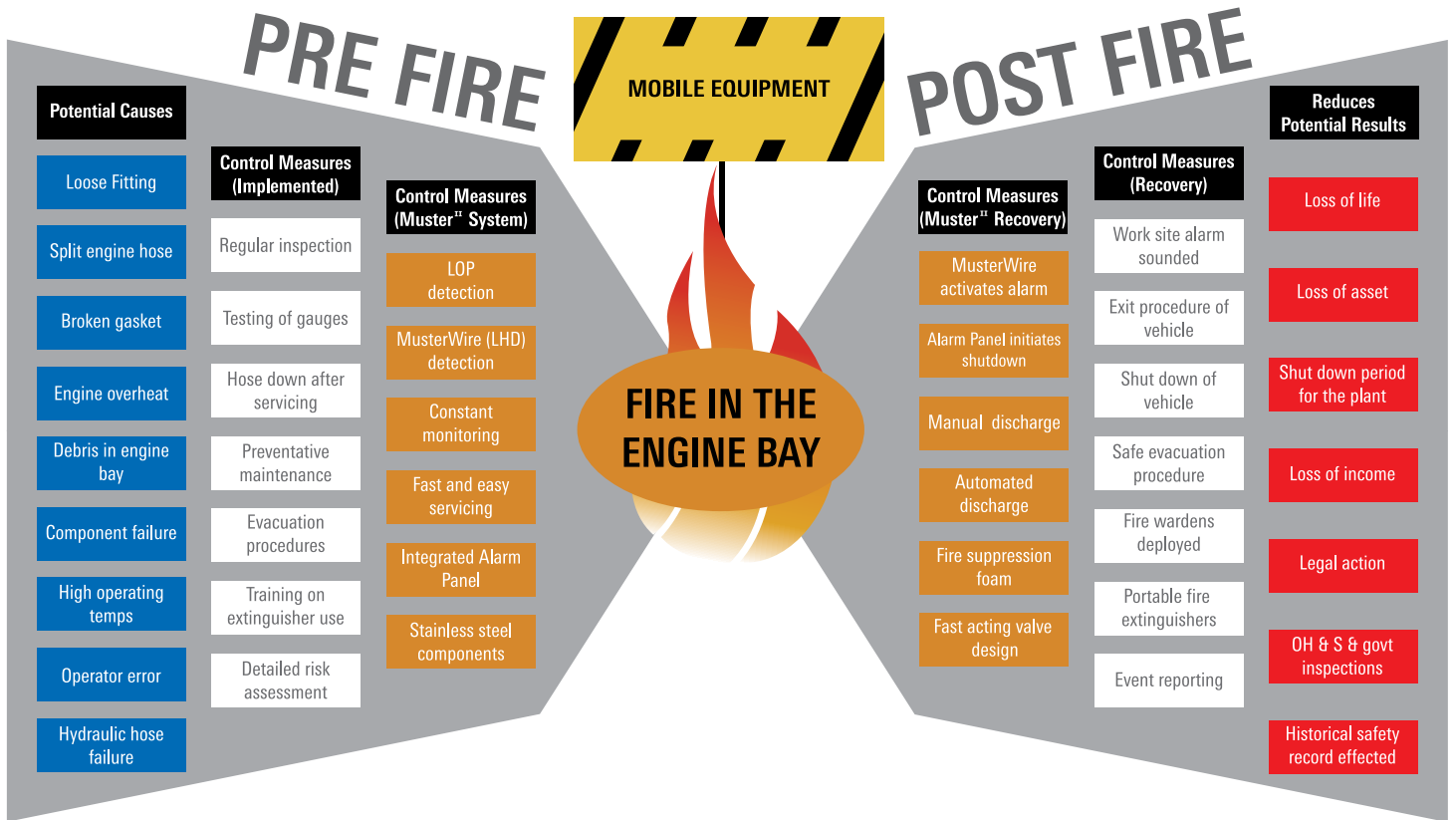
The Annual Testing Schedules form is a vertical document with the MUSTER logo at the top. It includes a table for scheduling and recording annual tests, with columns for test types and rows for specific equipment or dates.

Annual Testing Schedules

The Commissioning and Inspection Report form is a vertical document with the MUSTER logo at the top. It is a comprehensive form for recording installation and commissioning details. It includes sections for 'CLIENT DETAILS' (Customer, Address, Machine Make, Model No., Serial No., Commissioning Location), 'SERIAL NUMBERS' (listing six cylinders with their respective serial numbers and valve types), and 'NOZZLE SCHEDULE' (listing nozzle details). It also contains checkboxes for various installation and testing requirements.

Commissioning and Inspection Report

Risk management has become far more sophisticated in recent times as companies face the challenge of managing vast investments in capital equipment, as well as their human resources. Fire events, although low in probability, are often offset by catastrophic outcomes. As such, the Muster<sup>®</sup> approach is to partner with clients to investigate the “Big Picture” concept of fire prevention and suppression, and by utilising a comprehensive risk assessment procedure, follow a process whereby clients can, in real terms, reduce the risk of loss.

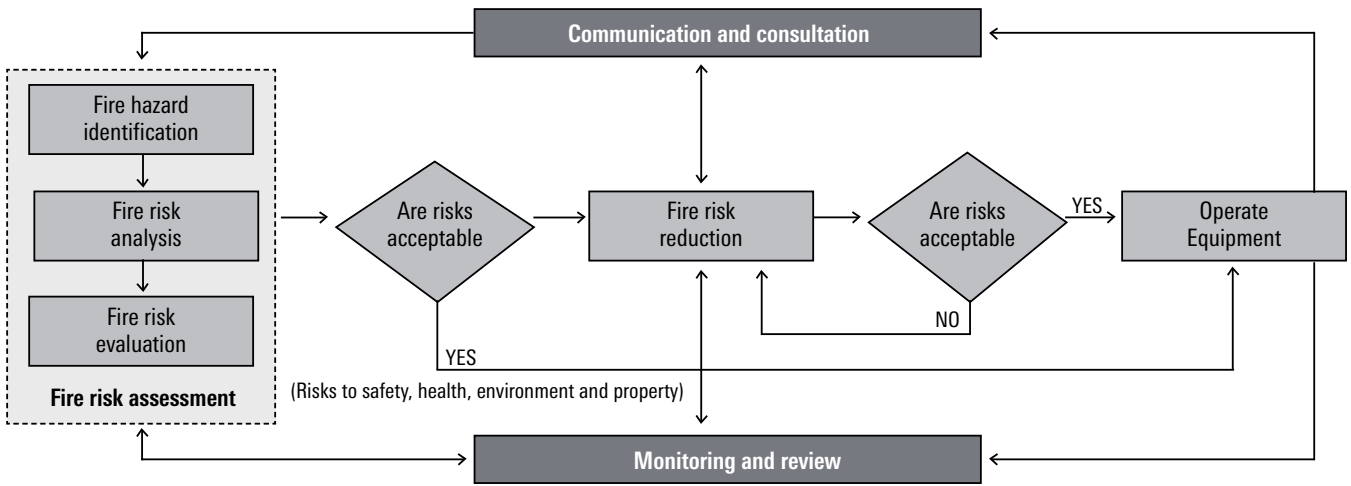


**24/7** INTEGRITY MONITORING LOWER RISK

## Documenting and Rating Each Fire Risk

The recommended approach is for the client to initiate communication and consultation. This will allow for an informed decision that identifies the hazards and risks. These risks on a predetermined scale and then agrees on suitable control measures to achieve the required level of protection. All hazards and risks related to specific known risk areas on the equipment. This will mean multiple risk analysis will need to be conducted and rated.

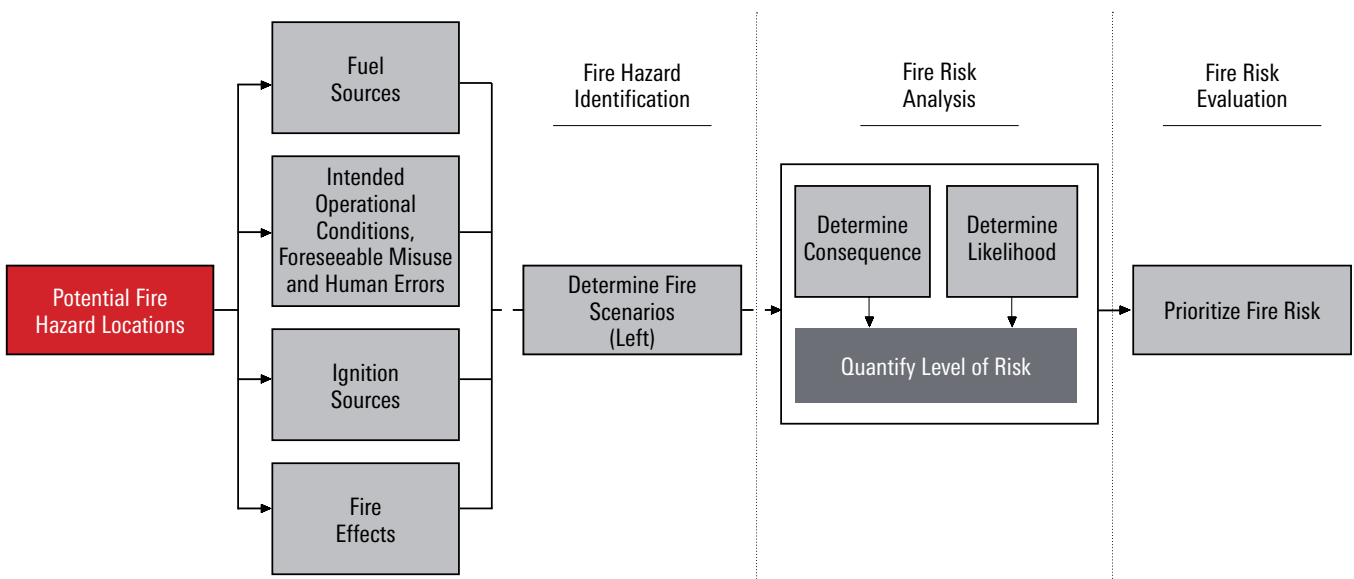
The Muster<sup>®</sup> system will form part of your 'Fire Risk Reduction' analysis, a critical step in the evaluation as seen below.



The Fire Risk Assessment Process

Fire Risk Analysis must be carried out to identify any areas which need to be addressed. This information will quantify the likelihood and consequence of the risk. This is done in order to create a safer work environment and comply with necessary fire legislations which may apply. Identification is the key; the system can only address the areas in which it is designed for and installed to suit. Areas that are not recorded in the analysis cannot be scaled by likelihood and consequence.

The Muster<sup>®</sup> Fire Suppression System allows you to assess all fire related risks and produces a comprehensive and itemised report.



Potential Fire Hazards Flow Chart

# FIRE EXTINGUISHERS

## Portable

### ABE Fire Extinguishers

Suitable for all paper, textiles, wood, plastics, rubber, petrol, oil, paints, LPG, CNG, Acetylene and electrically charged equipment.

DESCRIPTION	CAPACITY	PART NO.	RATING
ABE, Dry chemical	1.0kg	43-G1ABE-FF2	1A20BE
	1.5kg	43-G1.5ABESVB	2A20BE
	2.5kg	43-G2.5ABEVB	3A40BE
	4.5kg	43-G4.5ABE	4A60BE
	4.5kg	43-G4.5ABEHP	4A80BE
	6.0kg	43-G6ABE	4A80BE
	9.0kg	43-G9ABE	6A80BE
	9.0kg	43-G9ABEHP	6A80BE



ABE



Carbon Dioxide (CO<sub>2</sub>)

### Carbon Dioxide (CO<sub>2</sub>) Fire Extinguisher

This aluminium cylinder is complete with hose and horn.

DESCRIPTION	CAPACITY	PART NO.	RATING
Carbon dioxide (CO <sub>2</sub> )	3.5kg	43-G3.5CO2	5BE
	5.0kg	43-G5CO2	10BE



AFFF Foam



Wet Chemical

### AFFF Foam Fire Extinguisher

Concentrate mixed with water is best suited for the fires involving paper, textiles, wood, petrol, oil, paints, plastics and rubber.

DESCRIPTION	CAPACITY	PART NO.	RATING
AFFF foam	9.0L	43-G9LAFFF	3A30BE

### Wet Chemical Fire Extinguisher

Especially designed for fat and oil fires (Class F).

DESCRIPTION	CAPACITY	PART NO.	RATING
Wet chemical (W/C)	7.0L	43-G7LWC	3A4F

### Air / Water Fire Extinguisher

Recommended for Class A fires (wood, paper, plastics, textiles, rubber and rubbish).

DESCRIPTION	CAPACITY	PART NO.	RATING
Air / Water	9.0L	43-G9LAW	1A20BE



Air / Water

All Muster extinguishers; comply to Australian Standard/NZS 1841.6, and include stainless steel handles, brass valves and powder coated red finish.

## Heat Activated

The 6kg and 9kg ABE automatic extinguishers are set to activate at 79°C. Features include a steel cylinder and a powder coated red finish.

DESCRIPTION	CAPACITY	PART NO.
ABE automatic ABE	6.0kg	43-M6KGAuto79
	9.0kg	43-M9KGAuto79



ABE Automatic

## Trolley Mounted

A range of heavy duty trolley mounted extinguishers are available for various fire classes. These extinguishers have a high volume capacity starting at 30kg and ranging all the way up to 90kg. The trolley offers great mobility when faced with multiple large risk areas.

DESCRIPTION	CAPACITY	PART NO.
ABE trolley mounted	30kg	43-M30ABEM
	50kg	43-M50ABEM
	70kg	43-M70ABEM
	90kg	43-M90ABEM
BE trolley mounted	50kg	43-M50BEM
CO <sub>2</sub> trolley mounted	45kg	43-M45CO2M
AFFF trolley mounted	30kg	43-M30LAFFF
	50kg	43-M50LAFFF
	70kg	43-M70LAFFF
	90kg	43-M90LAFFF



ABE Mobile



BE Mobile



Carbon Dioxide (CO<sub>2</sub>)



AFFF Foam Mobile

## Support Products

### Fire Blankets

A fire blanket is a safety device designed to extinguish small incipient (starting) fires. It consists of a sheet of fire retardant material which either completely surrounds a burning object or is placed over a burning object and sealed closely to a solid surface around the fire.

### Location and ID Signs

Signs are placed above extinguishers when installed in and around buildings. The ID signs identifies the extinguisher type. Both location and ID signs are made from plastic.

### Heavy Duty Vehicle Brackets

**Fixed:** Muster's black powder coated heavy duty vehicle bracket to suit most 4.5kg or 9.0kg DCP fire extinguishers.

**Over Centre:** Heavy duty over centre bracket will fit 4.5kg or 9.0kg fire extinguisher. The quick release handle allows instant access to the extinguisher.

### UV Extinguisher Bags and Accessories

Muster's plastic extinguisher cover bags are large, thick bags that suit 4.5kg, 6kg or 9kg extinguishers and are UV treated.

DESCRIPTION	SIZE	PART NO.
Fire blankets	1.0m x 1.0m	43-FS100
	1.2m x 1.2m	43-FS120
	1.2m x 1.8m	43-FS128
	1.8m x 1.8m	43-FS180

DESCRIPTION	COMMENTS	PART NO.
Extinguisher generic	Suits ID signs	43-SILS
ID Signs	Powder	43-SABE
	Foam	43-SAF
	Water	43-SW
	Wet chemical	43-SWC
	CO <sub>2</sub>	43-SC02

DESCRIPTION	CYLINDER SIZE	PART NO.
Fixed bracket	2.5kg	43-WVBC25
	4.5kg	43-WVBC45
	9.0kg	43-WVBPC9
Over centre bracket	4.5kg	43-WVBOC45
	9.0kg	43-WVBOC9

DESCRIPTION	COMMENTS	PART NO.
Extinguisher bags	Suits 6kg – 9kg	43-WUVL
	Suits 4.5kg	43-WUVS
9" security ties	Thick tamper proof seals	M2ST01



Fire Blanket



Location Signs



Over Centre Bracket



Extinguisher Bags

## Extinguisher Servicing

Fire Extinguishers installed in all commercial, public and multi-occupancy residential buildings all need to be regularly inspected and tested. The inspection, test and maintenance procedures for fire extinguishers are specified in the Australian Standard AS 1851 "Maintenance of Fire Protection Systems and Equipment".

There are some key points that the general community and property owners should be aware of, to ensure they receive the appropriate level of servicing.

### Servicing Requirements









All extinguishers have to be inspected every six months. Checks include:

- Hydrostatic testing date stamp is within 5 years
- Extinguisher gauge is within operating range
- Previous test and servicing dates are marked on a metal tag attached to each unit
- The entire extinguisher is undamaged including the cylinder body, valve handle and hose/horn
- Safety pin is undamaged
- Area has no new hazards present that may be outside of the extinguisher's capability
- If partially discharged, an extinguisher will require specialised workshop refilling

### Servicing Personnel

- Servicing technicians need to identify themselves to a person responsible for the building before completing any work
- The service personnel should sign off all necessary documentation and then explain what service work they are charging for
- Small and large service companies carry out extinguisher servicing. Only in Queensland do the service technicians need to be licensed
- There are courses in extinguisher maintenance available nationally. These courses are not relevant if the company is only supplying the pre-stamped new extinguisher

### Type of Fire, Class and Suitability

								
EXTINGUISHING AGENT	WATER	WET CHEMICAL	FOAM	POWDER ABE	POWDER BE	CARBON DIOXIDE	VAPORISING LIQUID	FIRE BLANKET
A Wood, paper, and plastic	✓	✓	✓	✓	✗	LIMITED	✓	LIMITED
B Flammable and combustible liquids	✗	✗	✓	✓	✓	LIMITED	LIMITED	LIMITED
C Flammable gases	✗	✗	✗	✓	✓	✗	LIMITED	✗
E Electrically energised equipment	✗	✗	✗	✓	✓	✓	✓	✗
F Cooking oils and fats	✗	✓	✗	✗	✓	✗	✗	✓

# MUSTER" PART NUMBER LOCATIONS

PART NO.	PRODUCT DESCRIPTION	PG
<b>ALARM PANEL</b>		
M2AP01	Alarm Panel Only	14
M2APK01	Alarm Panel Kit	14
M2BP01	Battery Pack	14
M2FP01	Fuse pack 2 Amp x 10	14
M2AT01	Actuation Tag for MusterWire	14
M2AT02	Actuation Tag for LOP Blank	14
M2DM01	Diagnostic Manual	16
M2DEC01	Bulkhead Connector for M2DM01	16
<b>CYLINDER VALVES AND GAUGES</b>		
M2VA31	S/S Cylinder Valve, Electronic Assy	18
M2VA32	S/S Cylinder Valve, LOP Assy	19
M2VA33	Low Temp Electronic	18
M2TA31	Transducer Assembly LHD Systems	20
M2TA02	Transducer Assembly LOP Systems	21
M2OK31	O-ring Kit for Valve Assemblies	20
M2VN31	Valve Discharge Nipple 3/4" JIC	20
M2VN32	Valve Discharge Nipple 1 1/8" JIC	20
M2PGR01	Pressure Gauge Digital	20
M2PGR02	Pressure Gauge Mechanical	20
<b>ACTUATORS AND MANIFOLD BLOCK</b>		
M2RA31	Actuator Electronic, inc. 10m cable	17
M2RA32	Actuator LOP	17
M2ST01	Security Tie for Actuators	17
M2MB01	Manifold Block 6 port	21
M2PV01	Pneumatic Fuel Cut Off	21
<b>DETECTION, SENSORS AND CABLE</b>		
M2STK01	Fire Sensor Tube Kit 4m	21
M2STK02	Fire Sensor Tube Kit 8m	21
M2FW01	Fire Wire Kit 10m with Plugs	21
M2FW02	Fire Wire Kit 20m with Plugs	21
M2SC101	Silicone Cable 2 Core 10m	21
M2SC102	Silicone Cable 2 Core 20m	21
M2RP01	Resister Plug (End Of Line)	21
M2CP01	Connector Kit	21
M2G01	Grommet Red Silicone 2mm	30
M2G02	Grommet Red Silicone 5mm	30
<b>LABELS</b>		
M2L31	Remote Actuator	17
M2L09	'In the Event of a Fire' – Small	33
M2L10	'Warning' – Small	33
M2L11	'Warning' – Large	33
M2L12	Remote Actuator Location Arrow	33
M2CL01	Cylinder Label 22L	33
M2CL02	Cylinder Label 38L	33
M2CL04	Cylinder Label 66L	33
M2CL06	Cylinder Label 110L	33

PART NO.	PRODUCT DESCRIPTION	PG
<b>CYLINDERS</b>		
M2CK022	S/S Cylinder Set 22L	22
M2CK038	S/S Cylinder Set 38L	22
M2CK066	S/S Cylinder Set 66L	22
M2CK110	S/S Cylinder Set 110L	22
M2C022	S/S 22L Cylinder (Bare)	22
M2C038	S/S 38L Cylinder (Bare)	22
M2C066	S/S 66L Cylinder (Bare)	22
M2C110	S/S 110L Cylinder (Bare)	22
<b>BRACKETS AND MOUNTS</b>		
M2CB02238	S/S Bracket for 22L and 38L	24
M2CB66110	S/S Bracket for 66L and 110L	24
M2CS01	S/S Strap for 22L and 38L Bracket	24
M2CS02	S/S Strap for 66L and 110L Bracket	24
M2VE34	34mm Vibration Eliminator	24
M2VM50	Vibration Eliminator Weld Mount	24
<b>ADAPTERS AND CYLINDER PARTS</b>		
M2PU022	Pick Up Hose 22L	24
M2PU038	Pick Up Hose 38L	24
M2PU066	Pick Up Hose 66L	24
M2PU110	Pick Up Hose 110L	24
M2SRVP	S/S Safety Relief Valve	24
M2SRVC	S/S Safety Relief Cover	24
M2CR01	Cylinder Charging Kit	23
M2FT01	Filling Tube for Cylinders	23
<b>MISCELLANEOUS</b>		
M2TS01	MusterSeal 25ml	20
M2TT01	Date Test Tag	23
M2SR01	Date Tag - Split Ring	23
M2SP01	Date Tag - Service Punch	23
M2WM01	Weld Mount M8	24
M2CT01	Cable Ties, 200mm, 4.8mm	32
M2CT02	Cable Ties, 370mm, 4.8mm	32
M2CT03	Cable Ties, 380mm, 7.6mm	32
M2PC01	S/S P Clamp, 1/4" Hose	32
M2PC02	S/S P Clamp, 1/2" Hose	32
M2PC03	S/S P Clamp, 3/4" Hose	32
M2SC01	S/S Tube Clamp 1/4" Hose	32
M2SC02	S/S Tube Clamp 1/2" Hose	32
M2SC03	S/S Tube Clamp 3/4" Hose	32

PART NO.	PRODUCT DESCRIPTION	PG
<b>FOAMS</b>		
M2SFC022	Standard 176ml (22L Cylinder)	27
M2SFC038	Standard 304ml (38L Cylinder)	27
M2SFC066	Standard 538ml (66L Cylinder)	27
M2SFC110	Standard 880ml (110L Cylinder)	27
M2SFB005	Standard 5L (must measure)	27
M2SFB020	Standard 20L (must measure)	27
M2SFB200	Standard 200L (must measure)	27
M2AFB005	Advanced 5L (Do not mix)	27
M2AFB020	Advanced 20L (Do not mix)	27
<b>FITTINGS</b>		
M2BH01	S/S Bulkhead Nipple, 7/16" JIC M/M	30
M2BH02	S/S Bulkhead Nipple, 3/4" JIC M/M	30
M2BH03	S/S Bulkhead Nipple, 1 1/16" JIC M/M	30
M2NP0207	S/S Nipple, 1/8" BSP M x 7/16" JIC M	30
M2NP0407	S/S Nipple, 1/4" BSP M x 7/16" JIC M	30
M2E01	S/S Elbow, 1/4" 45° BSP M/F	30
M2E02	S/S Elbow, 1/4" 90° BSP M/F	30
M2MT01	S/S Tee, 3/4" JIC M-F-M	30
M2MT02	S/S Tee 1 1/16" JIC M 3/4" JIC F-M	30
M2T07	S/S Tee, 7/16" JIC M-F-M	30
M2PL02	S/S Plug, 1/8" BSP T M	30
M2PL04	S/S Plug, 1/4" BSP T M	30
<b>NOZZLES</b>		
M2NA01	S/S Nozzle with Cap, 120°	29
M2NA02	S/S Nozzle with Cap, 60°	29
M2NC01	MusterCap	29
<b>NOZZLE MOUNT ASSEMBLIES</b>		
M2BA01	S/S Twin Mount, Inline	28
M2BA02	S/S Twin Mount, End of Line	28
M2BA03	S/S Single Mount, Inline	28
M2BA04	S/S Single Mount, End of Line	28
<b>HOSE, S/S TUBE AND HOSE FITTINGS</b>		
M2SST01	S/S Tube 12.7mm x 2m	32
M2SST02	S/S Compression Nut and Olive	32
M2SH01	Red Fire Hose - 1/4" I.D	31
M2SH02	Red Fire Hose - 1/2" I.D	31
M2SH03	Red Fire Hose - 3/4" I.D	31
M2SW01	Red Spiral Wrap / m	31
M2SW02	Red Spiral Wrap / m	31
M2SW03	Red Spiral Wrap / m	31
M2HTP01	1/4" Hose Straight Hose Tail	31
M2HTP02	1/4" Hose 90° Hose Tail	31
M2HTP03	1/2" Hose Straight Hose Tail	31
M2HTP04	1/2" Hose 90° Hose Tail	31
M2HTP05	3/4" Hose Straight Hose Tail	31
M2HTP06	3/4" Hose 90° Hose Tail	31

Note: For valve adaptors see page 25.



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**MUSTER<sup>II</sup>**  
FIRE SUPPRESSION SYSTEMS



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