



DESIGN

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Thank you for purchasing an SPA SFI 17.1 system

Thank you for purchasing a SPA SFI 17.1 system. It is important that you read the following instructions carefully before attempting to install your fire suppression system.

The performance of this system could be affected if it is in anyway modified or tampered with may make void its homologation. Please ensure that should any parts need to be replaced; only genuine SPA components are used.

Should you require any assistance, please do not hesitate in contacting SPA Design on 01543 434 580 or SPA Technique on 317-271-7941.

IMPORTANT NOTE

The purpose of this along with any other vehicle fire suppression system is to provide sufficient time in which to control the fire to enable the occupants to leave the vehicle. In ideal conditions, the fire will be extinguished completely but this can not be guaranteed. The main purpose is to curb the intensity of either an engine or cockpit fire to provide the means for the occupants to leave the vehicle or for outside assistance to be given.

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5lb LV (lever valve)

2 x Mounts	Standard or Billet
1 x 02-SP 018	6 foot pull cable
2 x Nozzles	02-SP 098 for Extreme (3M™Novec™ 1230) or 02-SPAFs N WL for FireSense (FireAde or 4fire)
1 x 02-SPAsfi 025	T fitting
1 x 02-SPAsfi 012	bulkhead fitting
10 x 02-SPAsfi 020	5/16 inch aluminum tubing per foot
Or	
12.5 x 02-SPAsfi 021 or 022	5/16inch steel or ez-bend steel tubing per foot
1 x 02-SP 017	E sticker (4") (for placing near or at the activation point for anyone to be able to locate)

5lb M (machined head 2 pull cable)

2 x Mounts	Standard or Billet
1 x 02-SP 018	6 foot pull cable
2 x Nozzles	02-SP 098 for Extreme (3M™Novec 1230) or 02-SPAFs N WL for FireSense (FireAde or 4fire)
1 x 02-SPAsfi 011	T fitting
1 x 02-SPAsfi 012	bulkhead fitting
10 x 02-SPAsfi 020	5/16 inch aluminum tubing per foot foot
Or	
12.5 x 02-SPAsfi 021 or 022	5/16inch steel or ez-bend steel tubing per foot
1 x 02-SP 017	E sticker (4") (for placing near or at the activation point for anyone to be able to locate)

5lb LW (light weight single pull machined head),

2 x Mounts	Standard or Billet
1 x 02-SP 018	6 foot pull cable
2 x Nozzles	02-SP 098 for Extreme (3M™Novec 1230) or 02-SPAFs N WL for FireSense (FireAde or 4fire)
1 x 02-SPAsfi 011	T fitting
1 x 02-SPAsfi 012	bulkhead fitting
10 x 02-SPAsfi 020	5/16 inch aluminum tubing per foot foot
Or	
12.5 x 02-SPAsfi 021 or 022	5/16inch steel or ez-bend steel tubing per foot
1 x 02-SP 017	E sticker (4") (for placing near or at the activation point for anyone to be able to locate)
1 x 02-SPAsfi 201	1.5mm Allen key to tighten set screw on to cable
1 x 02-SPAsfi 202	2.5mm Allen key to tighten optional cap screw on to cable
1 x 02-SPAsfi 203	Optional cap screw, only use if cable is not pulling pin/screw into the activation head

10lb LV (lever valve)

2 x Mounts	Standard or Billet
1 x 02-SP 018	6 foot pull cable
4 x Nozzles	02-SP 098 for Extreme (3M™Novec 1230) or 02-SPAs N WL for FireSense (FireAde or 4fire)
3 x 02-SPAsfi 025	T fitting
1 x 02-SPAsfi 012	bulkhead fitting
10 x 02-SPAsfi 020	5/16 inch aluminum tubing per foot
Or	
12.5 x 02-SPAsfi 021 or 022	5/16inch steel or ez-bend steel tubing per foot
1 x 02-SP 017	E sticker (4") (for placing near or at the activation point for anyone to be able to locate)

10lb M (machined head 2 pull cable)

2 x Mounts	Standard or Billet
1 x 02-SP 018	6 foot pull cable
4 x Nozzles	02-SP 098 for Extreme (3M™Novec 1230) or 02-SPAs N WL for FireSense (FireAde or 4fire)
3 x 02-SPAsfi 011	T fitting
1 x 02-SPAsfi 012	bulkhead fitting
10 x 02-SPAsfi 020	5/16 inch aluminum tubing per foot foot
Or	
12.5 x 02-SPAsfi 021 or 022	5/16inch steel or ez-bend steel tubing per foot
1 x 02-SP 017	E sticker (4") (for placing near or at the activation point for anyone to be able to locate)

10lb LW (light weight single pull machined head),

2 x Mounts	Standard or Billet
1 x 02-SP 018	6 foot pull cable
4 x Nozzles	02-SP 098 for Extreme (3M™Novec 1230) or 02-SPAs N WL for FireSense (FireAde or 4fire)
3 x 02-SPAsfi 011	T fitting
1 x 02-SPAsfi 012	bulkhead fitting
10 x 02-SPAsfi 020	5/16 inch aluminum tubing per foot foot
Or	
12.5 x 02-SPAsfi 021 or 022	5/16inch steel or ez-bend steel tubing per foot
1 x 02-SP 017	E sticker (4") (for placing near or at the activation point for anyone to be able to locate)
1 x 02-SPAsfi 201	1.5mm Allen key to tighten set screw on to cable
1 x 02-SPAsfi 202	2.5mm Allen key to tighten optional cap screw on to cable
1 x 02-SPAsfi 203	Optional cap screw, only use if cable is not pulling pin/screw into the activation head

Optional parts

02-SPAsfi 013	90 degree elbow, 5/16 tube to 5/16 tube
02-SPAsfi 015	Swivel 90 degree elbow 1/4bsp to 5/16 tube (can be used nozzles)
02-SPAsfi 016	Swivel T fitting 1/4bsp to 5/16 tube, 5/16 tube (can be used on LV & LW activation type)
02-SPAsfi 017	5/16 tube to tube coupler
02-SPAsfi 020	5/16 inch aluminum tubing
02-SPAsfi 021	5/16 inch steel tubing (this tubing is required by LODLMS, NASCAR, NHRA and some other racing series please check your rule book)
02-SPAsfi 022	5/16 inch ez-bend steel tubing (this tubing is required by LODLMS, NASCAR, NHRA and some other racing series please check your rule book)
02-SP 018	6 foot pull cable
02-SP 019	12 foot pull cable
02-SP 129	E sticker (1") (for placing near or at the activation point for anyone to be able to locate)
02-SPAT 86	+ or - 3.5"dia Cylinder Strap Mount
02-SPAT 94	+ or - 4.0"dia Cylinder Strap Mount
02-SPAT 99	+ or - 4.375"dia Cylinder Strap Mount
02-SPAT 112	+ or - 5.25"dia Cylinder Strap Mount
02-SPAT B3.5	Billet Mount for Aluminum Cylinder 3.5"dia (DOT39 5lb) 1 3/4" chassis tube standard
02-SPAT B4.0	Billet Mount for Aluminum Cylinder 4"dia (DOT39 5lb) 1 3/4" chassis tube standard
02-SPAT B4.375	Billet Mount for Aluminum Cylinder 4.375"dia (DOT3AL 5lb) 1 3/4" chassis tube standard.
02-SPAT B5.25	Billet Mount for Aluminum Cylinder 5.25"dia (DOT3AL 10lb) 1 3/4" chassis tube standard.
02-SPAT B1.75-1.25	Billet Mount Adapter to 1 1/4" chassis tube
02-SPAT B1.75-1.5	Billet Mount Adapter to 1 1/2" chassis tube
02-SPAT B1.75-1.625	Billet Mount Adapter to 1 5/8" chassis tube

FITTING INSTRUCTIONS

Unpack all parts and check components against kit list.

Decide the best position for the extinguisher.

It is highly recommended that the cylinder/bottle be mounted inside the main crash structure of the vehicle, to not be ripped off or damaged in a crash

It is also recommended that the bottle not be mounted with the head in the downward position in the vehicle.

The extinguisher label detailing contents, etc and also the pressure gauge should be visible.

Mount securely to the vehicle.

TUBING

Each SPA SFI System kit is supplied with 5/16 aluminum tubing or steel tubing. The SPA SFI system has been designed and meets or exceeds SFI 17.1 specifications using this type of tube. After cutting tubing, deburr inside and outside for best flow and easier connection to fittings.

TUBE CONNECTIONS

All fittings for tube to nozzles and bottle are of the push-in type. Insert the tube into the fitting, push firmly until it clicks. Once in, you should not be able to pull it out.

To remove the tubing, push the tube into the fitting and at the same time push the collet back towards the fitting and then pull the tube from the fitting

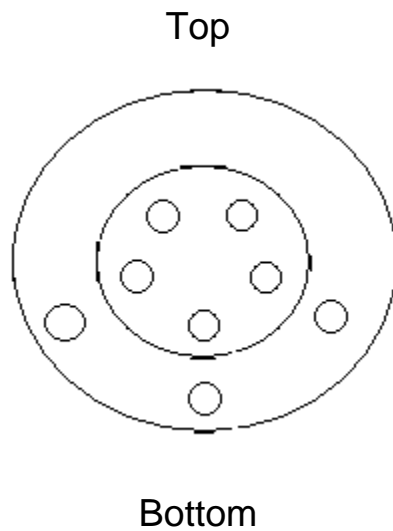
ACTIVATION POINT

Activation should be mounted within easy reach of the driver. An E sticker should be placed at this spot to make finding it easier for the driver or anyone else to activate the system if needed. With a pull cable, after fitting but not connected to activate. Make sure it moves freely, as to tight of bend(s) or too many bends may cause it to bind up.

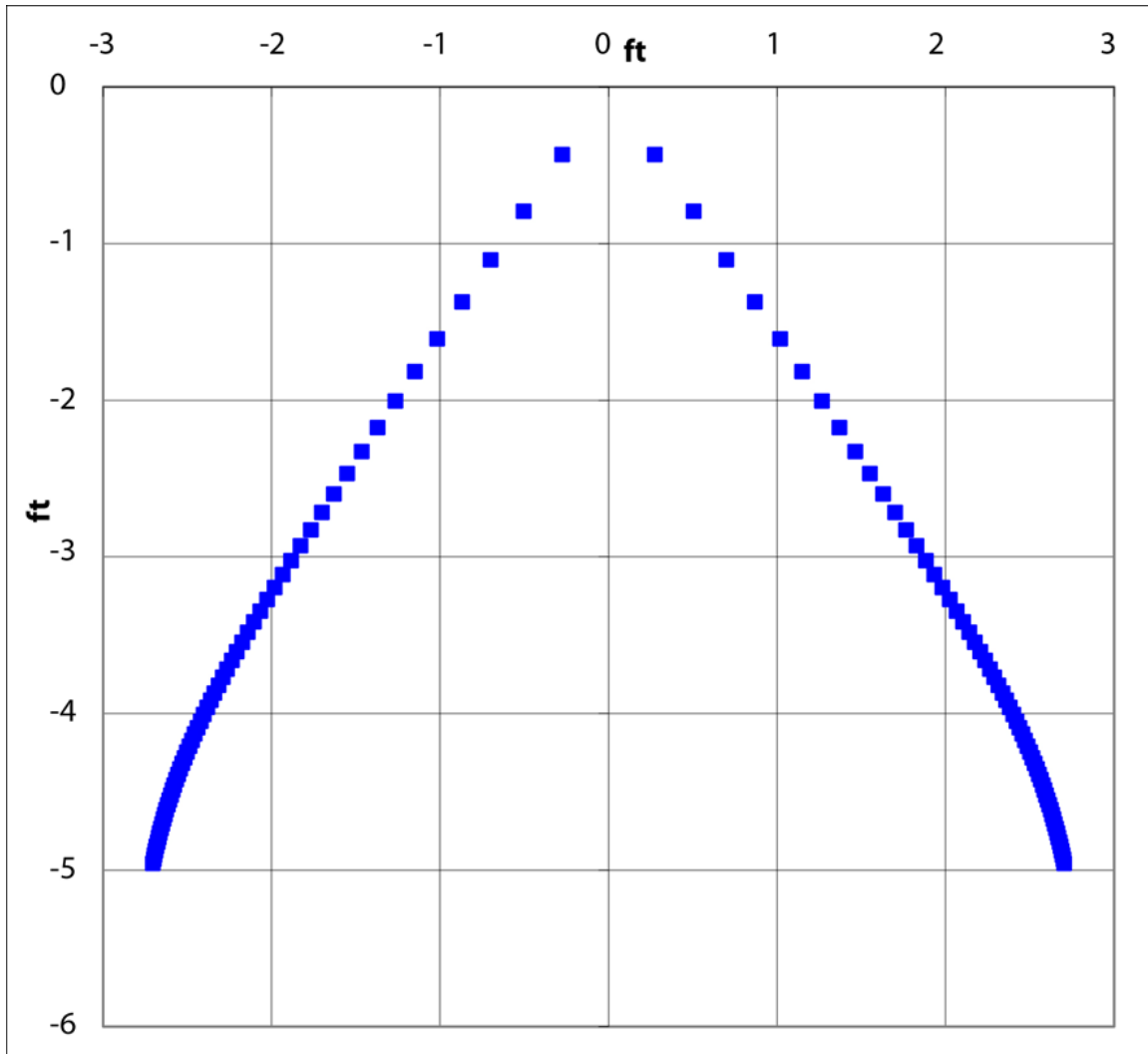
Be sure to have the nozzle spray the body of the driver. **Don't have it spray directly at helmet / face of the driver, as this may keep from seeing to exit the vehicle.**

Correct nozzle orientation for Extreme (Novec 1230)

Make sure nozzle is mounted in this orientation to work correctly - With the holes on the body of the nozzle facing down.



Approximate nozzle spray pattern for FireSense (FireAde & 4fire)



MAINTENANCE

To ensure maximum possible performance from your SPA System, the following checks and maintenance procedures should be carried out.

- Regularly check pressure gauge to ensure they are in the green sector.
- Regularly check nozzles for debris or any obstructions.
- Regularly check the integrity of the pipe work and fittings.
- Your SPA system **must** be serviced every 2 years by SFI17.1 rules.

A service date is written on the content label on the extinguisher. It is up to you to ensure that the servicing is carried out at the correct intervals. Servicing of the system must be carried out by SPA or Approved Vendor

- If your system has been discharged, you must return it to SPA or dealers for servicing and refilling.

NOTES

Please ensure that you monitor the following, as you **MAY NOT** pass scrutineering/tech **IF**:

- The needle of the gauge is in the red.
- The bottle label is worn, damaged or unreadable.
- The unit is not within the service date.
- The system is in poor condition.

Before going on track

- Make sure any and all safety pins are out.
- Make sure if system has a valve that it is in the open position and recommend safety wiring it in the open position.
- Have driver practice reaching to activate system without being able to see belted in.

EXTREME® DATA SHEET

COMPOSITION Dodecafluoro-2-methylpentan-3-one, (CF₃CF₂C (O) CF (CF₃)₂)
ODP (Ozone Depletion Potential) NONE
OPERATING TEMPERATURE - 40 - + 80 °C
FREEZING POINT - 108 °C
CRITICAL TEMPERATURE 168.7 °C
PHYSIOLOGICAL PROPERTIES No Observed Adverse Effect Level and Lowest Observed Adverse Effect Level for cardiac sensitization (halocarbons) and oxygen depletion (Inert gas).

A copy of the 3M™ Novec™ 1230 Fire Protection Fluid material safety data sheet can be obtained from SPA Design, SPA Technique or 3M upon request.

FireSense (FireAde) DATA SHEET

COMPOSITION Proprietary blend, information will be provided to a physician as needed
ODP (Ozone Depletion Potential) NONE
OPERATING TEMPERATURE -40 - 124°C
FREEZING POINT - 40 °C
PHYSIOLOGICAL PROPERTIES No observed adverse effect level and lowest observed adverse effect level. This product is ph neutral and contains no toxic components

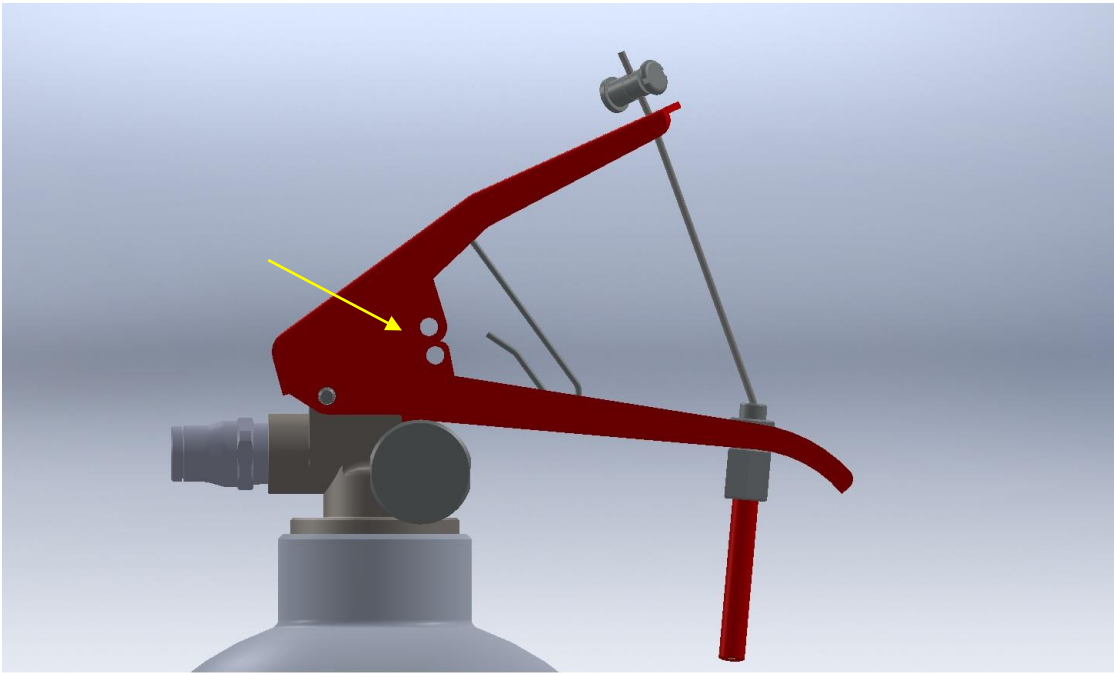
A copy of the FireAde®2000 Climate Controlled Pre-Mix material safety data sheet can be obtained from SPA Design, SPA Technique or Fire Service Plus/FireAde upon request.

FireSense + (4fire) DATA SHEET

COMPOSITION Proprietary blend, information will be provided to a physician as needed
ODP (Ozone Depletion Potential) NONE
OPERATING TEMPERATURE -30 - 120°C
FREEZING POINT - 30 °C
PHYSIOLOGICAL PROPERTIES No observed adverse effect level and lowest observed adverse effect level. This product is ph neutral and contains no toxic components

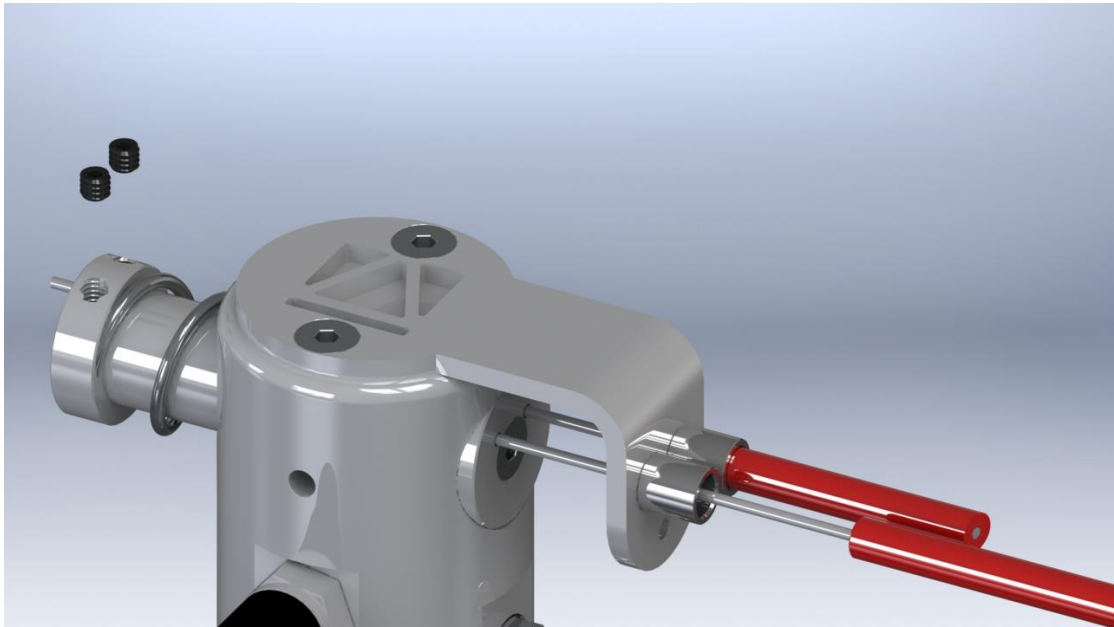
A copy of the 4fire material safety data sheet can be obtained from SPA Design, SPA Technique or 4fire International upon request.

Pull cable installation for lever valve



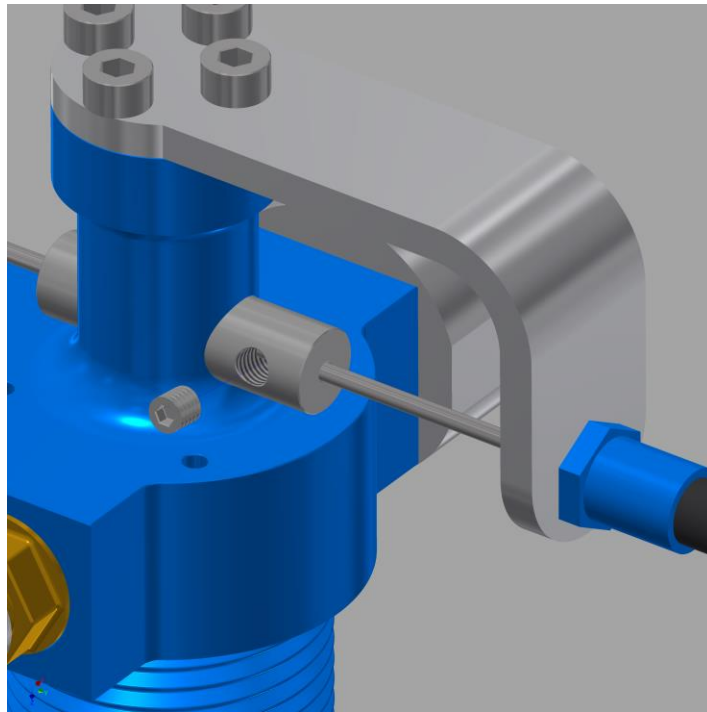
Note: Hole position shown is correct for safety pin installation (denoted by arrow). Do not try to lineup the holes for the pin as this might cause discharge.

Pull cable installation for machined head



Make sure set screws (black toward upper left of image) are tight. It is recommended to use a small tread locktight to make sure these do not come loose. **System will not work if these set screws are not tightened down.** Recommended torque on the set screws is 25 inch/lbs.

Pull cable installation for LW (lightweight) head



Make sure set screw is tight. **System will not work if these set screws are not tightened down.** Optional cap screw can be used if cable is pulling as shown. If bracket is flipped/moved to the other side it cannot be used. As the activation pin pull not pull through to activate the system.

