



## Fire Extinguisher System Manual for FIA Standard 8865

FX G-TEC 3300R Advanced Discharge System (Long Cylinder)  
FX G-TEC 3300R-D Advanced Discharge System (Dumpy Cylinder)

Please read all parts of this manual carefully before you proceed to install your new purchase. The system has been carefully developed to meet the new standard 8865 2015 which is part of the FIA's new program in making Motorsport a much safer sport for all who take part.

The new standard has been designed to meet much tougher criteria, testing with much larger and hotter fires with greater quantities of fuels together with plastics and masking elements to extinguish. In this new standard electrical components are now IP rated and other parts have been vigorously tested to meet certain BSI standards.

### **FIA**

It must be emphasised that any plumbed in fire extinguisher system is mainly designed to delay the development of the fire and consequently give the driver and co-driver time to exit the car; the system is not designed to put out the fire and prevent the car from burning.

Please do not tamper with, make changes or use non FEV parts on your new fire extinguisher system as this will invalidate the Homologation and affect the performance of the product. If any new parts are needed please call FEV on 0044 (0) 1243 55 55 66

You will have to purchase a 9 volt PP3 battery for the control box.

Also if any changes have been made to this product from the specification, it could in effect stop you racing.



## Contents.

2 Plumbing schematic drawings

1 Installation instructions

1 cylinder	FE-CYL-3300R	- Long cylinder 101mm x363mm
	FE-CYL-3300R-D	- Dumpy cylinder 125mm x 255mm
1 Cradle bracket	FE-CRL-3300	
2 Cradle straps	FE-CRL-S-3300	
1 Braided hose	FE-B-HOS-3300	
1 33 gram remote charge	FE-REM-33-CHAR	
1 Remote clamp	FE-REM-C-3300	
2 Remote clamp bolts	FE-REM-C-B-3300	
6.2mtr of 8mm Aluminium tubing	FE-ALI-8-3300	
10 Aluminium tube clips	FE-AT-C-3300	
2 Cockpit bar nozzles	FE-8-JET BAR-NOZ-1.5-B	
2 Engine tri nozzles black	FE-TRI-NOZ-1.5-B	
1 Cross connector 8mm metal	FE-X-CON-8-M	
3 Tee connectors 8mm metal	FE-TEE-CON-8-M	
1 internal firing button	FE-INT-FB	
1 fire button metal shroud	FE-INT-FB-S-M	
1 External fire button	FE-EXT-FB	
1 Control box 8865	FE-CB-8865,	battery not included.
1 Control box loom	FE-CB-L-8865	

Fire Extinguisher Valve Co Ltd

Unit 10, Ford Lane Business Park, Ford, Nr Arundel, West Sussex

Tel: +44 (0) 1243 55 55 66 Fax: +44 (0) 1243 555 660



## **Installation of cylinder and other components.**

### **Cylinder.**

Find a suitable place either behind the drivers or co-driver's seat or in the co driver's footwell to fix the fire extinguisher cylinder, the cylinder assembly can be fixed either in a transverse or longitude position. There is no need to take the cylinder out of the cradle bracket and straps as the cylinder comes already installed into the cradle bracket. The newly designed cradle bracket has access to the four fixing holes and only needs marking through onto the car floor where you want to fix the assembly. Once the markings have been made put the assembly to one side then carefully drill holes for 4 off fixing bolts – we recommend M6 bolts with shake-proof washers and Nyloc nuts, bolt the cylinder assembly to the floor.

**Please note the system must be installed in accordance with the championship technical regulation.**

### **Cockpit nozzles**

The two cockpit bar nozzles are designed to be fitted onto the side of the B pillars at the top on a suitable bracket, When fitted the nozzles should be directed downwards between the door and the foam added on the seat head support (called VC) do not allow spray to be directed at occupants heads, when the nozzles are installed they should be a minimum distance of 108.8mm above the top of the seat head support (called VC).

### **Engine nozzles.**

The two engine nozzles must be fitted through the cockpit/engine bulkhead approximately 30 centimetres each side of centre and as near to the top as possible (unless obstructed) in a horizontal position, nozzle drill size 13mm.

### **Aluminium tubing.**

The pipework for the system is Aluminium. Route the pipework neatly around the car to the different locations. When making bends in the piping try and make a minimum radius of 50mm, and when cutting the pipes make sure the ends are square or use a pipe cutter if possible and de-burr the ends, push all ends of the pipes into the various fittings, they should push in 18mm. **When installing the cockpit nozzles do not route the tubing between car body sides and outside of the roll cage, as an impact on the side of the car body could trap and crush the tubing between the roll cage and body work, always route the tubing onto the car's internal side of the roll cage.**

See separate plumbing instructions for the complete plumbing schematics.

Fire Extinguisher Valve Co Ltd

Unit 10, Ford Lane Business Park, Ford, Nr Arundel, West Sussex

Tel: +44 (0) 1243 55 55 66 Fax: +44 (0) 1243 555 660

FX G-TEC3300R 18-07-17

VAT Reg No: 737 3307 34 Company Reg No: 4643893



### **Control box.**

Mount the control box in a suitable position where it can be reached by the driver and co-driver, making sure that the LED lights are visible to the driver and co-driver. Please ensure that the wiring loom for the control box is fixed suitably so that it cannot be damaged or become a hazard.

### **Wiring loom**

The wiring loom has two screw connectors; the connector on the longest length of cable is a two pin connector and connects to the plug on the remote charge which is attached to the fire extinguisher **connect this lead last and make sure the control box is in the test position.** The shorter length of cable with the three pin plug attached connects to the control box. The branch in the loom goes to the internal fire button, make a suitable connection. Using the separate (supplied) cable already attached to the external fire button fit the button externally then route the cable inside the car to attach to the connections of the internal fire button.

### **Activation buttons.**

There are two activation buttons, one internal and one external. Mount the internal button in a position within easy reach for the driver and co-driver where applicable (19mm diameter hole), mount the external button (22mm) next to the electrical cut off switch. Apply the E decal label next to the external firing switch.



### **F.E.V. CONTROL BOX - V1 - FIA 8865**

**EX.008.16-** FX G-TEC 3300R Advanced Discharge System (Long Cylinder) FX G-TEC 3300R-D Advanced Discharge System (Dumpy Cylinder)

**EX.010.17** - FX G-TEC 3300R3 Advanced Discharge System (Long Cylinder) FX G-TEC 3300R3-D Advanced Discharge System (Dumpy Cylinder)

### **INSTRUCTIONS**

The control box is supplied with a separate wiring loom with a connector on each end; the longest length of wire has a male 2-pin IP67 rated plug for connection to the female 2 pin IP67 socket in the Remote Charge Cartridge, when connected they are screwed together to make a seal. The other end of the loom is fitted with a male 3 pin IP67 rated waterproof plug, this plug connects to the female 3 pin IP67 socket in the bottom of the control box and when connected they are screwed together to make a seal. . The branch in the loom goes to the internal fire button, make a suitable connection. Using the separate (supplied) cable already attached to the external fire button fit the button externally then route the cable inside the car to attach to the connections of the internal fire button.

#### **Setting up The System**

The control box has a 2 position on-on toggle switch to select the function.

The up position is ARM with a red LED and down position TEST with a orange LED.

#### **Test position LED orange**

To test the control box – put switch to test – the control box does its own internal test. If a fault is found the orange light will continuously flash for at least 10 seconds. If no fault is found the orange light will stay on for at least 10 seconds. With the orange light on, press and release one of the firing buttons (light will go out and come back on). This must be done within the 10 seconds while the orange light is on. If a fault is found the orange light will continuously flash for at least 10 seconds. If no fault is found the orange light will stay on for at least 10 seconds.

#### **Armed Position red LED**

Switch to the armed position - whenever the switch is moved from the test to the armed position, the control box will run an automatic test to ascertain that there is no anomaly, only after those checks will the LED start to flash continually indicating the control box is operational. **Only press the fire button if needed, this will activate the system.**

#### **Recommend after use.**

Whenever the control box is not in use position the switch into test mode – all the lights are off - this will enable the control box to go into sleep mode and save battery. If the vehicle is not going to be used for a long period, we would recommend you remove the battery from the control box.

#### **Preparation for race**

Check all wiring connections and run through the test position procedure before each race to test for any anomaly.

#### **Battery fitment**

This control box is IP67 rated. This is why the box has to be removed from fitment and the four screws removed from the back of the box to replace the battery - battery type 9 volt PP3 alkaline.

Fire Extinguisher Valve Co Ltd

Unit 10, Ford Lane Business Park, Ford, Nr Arundel, West Sussex

Tel: +44 (0) 1243 55 55 66 Fax: +44 (0) 1243 555 660

FX G-TEC3300R 18-07-17

VAT Reg No: 737 3307 34 Company Reg No: 4643893



## **F.E.V. CONTROL BOX - V2 - FIA 8865**

**EX.008.16-** FX G-TEC 3300R Advanced Discharge System (Long Cylinder) FX G-TEC 3300R-D Advanced Discharge System (Dumpy Cylinder)

**EX.010.17** - FX G-TEC 3300R3 Advanced Discharge System (Long Cylinder) FX G-TEC 3300R3-D Advanced Discharge System (Dumpy Cylinder)

### **INSTRUCTIONS**

The control box is supplied with a separate wiring loom with a connector on each end; the longest length of wire has a male 2-pin IP67 rated plug for connection to the female 2 pin IP67 socket in the Remote Charge Cartridge, when connected they are screwed together to make a seal. The other end of the loom is fitted with a male 3 pin IP67 rated waterproof plug, this plug connects to the female 3 pin IP67 socket in the bottom of the control box and when connected they are screwed together to make a seal. The branch in the loom goes to the internal fire button, make a suitable connection. Using the separate (supplied) cable already attached to the external fire button fit the button externally then route the cable inside the car to attach to the connections of the internal fire button.

#### **Setting up The System**

The control box has a 2 position on-on toggle switch to select the function. The up position is ARM with a red LED and down position TEST with a orange LED.

#### **Test position LED orange**

To test the system put the switch into the TEST position and press either of the firing buttons – external or internal. If the TEST is successful, the Orange LED will be on for 10 seconds. If the TEST is unsuccessful the Orange LED will flash for 10 seconds or more, indicating a fault in one of the following items – low battery, electrical discontinuity, button to trigger the system, plug on the remote charge or firing actuator in the remote charge.

#### **Armed Position red LED**

Switch to the armed position - whenever the switch is moved from the test to the armed position, the control box will run an automatic test to ascertain that there is no anomaly, only after those checks will the LED start to flash continually indicating the control box is operational. **Only press the fire button if needed, this will activate the system.**

#### **Recommend after use.**

Whenever the control box is not in use position the switch into test mode – all the lights are off - this will enable the control box to go into sleep mode and save battery. If the vehicle is not going to be used for a long period, we would recommend you remove the battery from the control box.

#### **Preparation for race**

Check all wiring connections and run through the test position procedure before each race to test for any anomaly.

#### **Battery fitment**

This control box is IP67 rated. This is why the box has to be removed from fitment and the four screws removed from the back of the box to replace the battery - battery type 9 volt PP3 alkaline

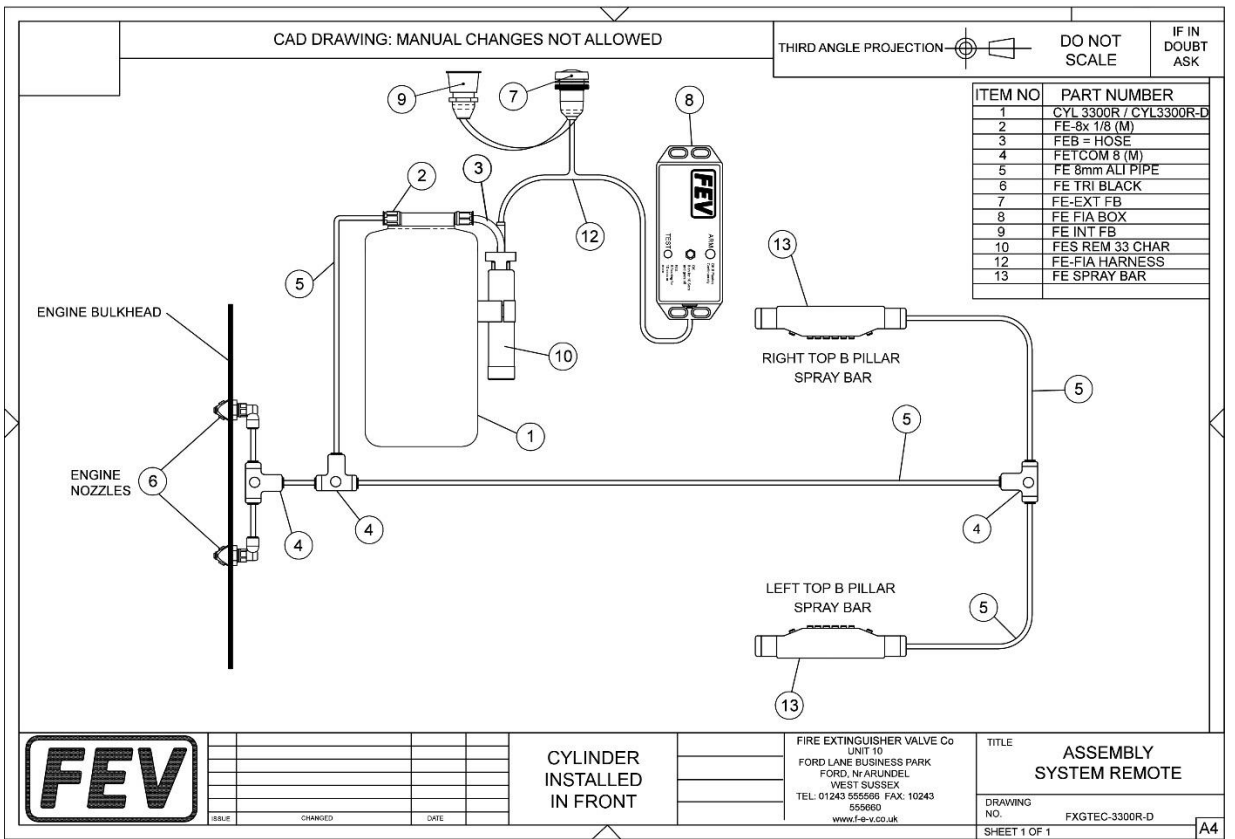
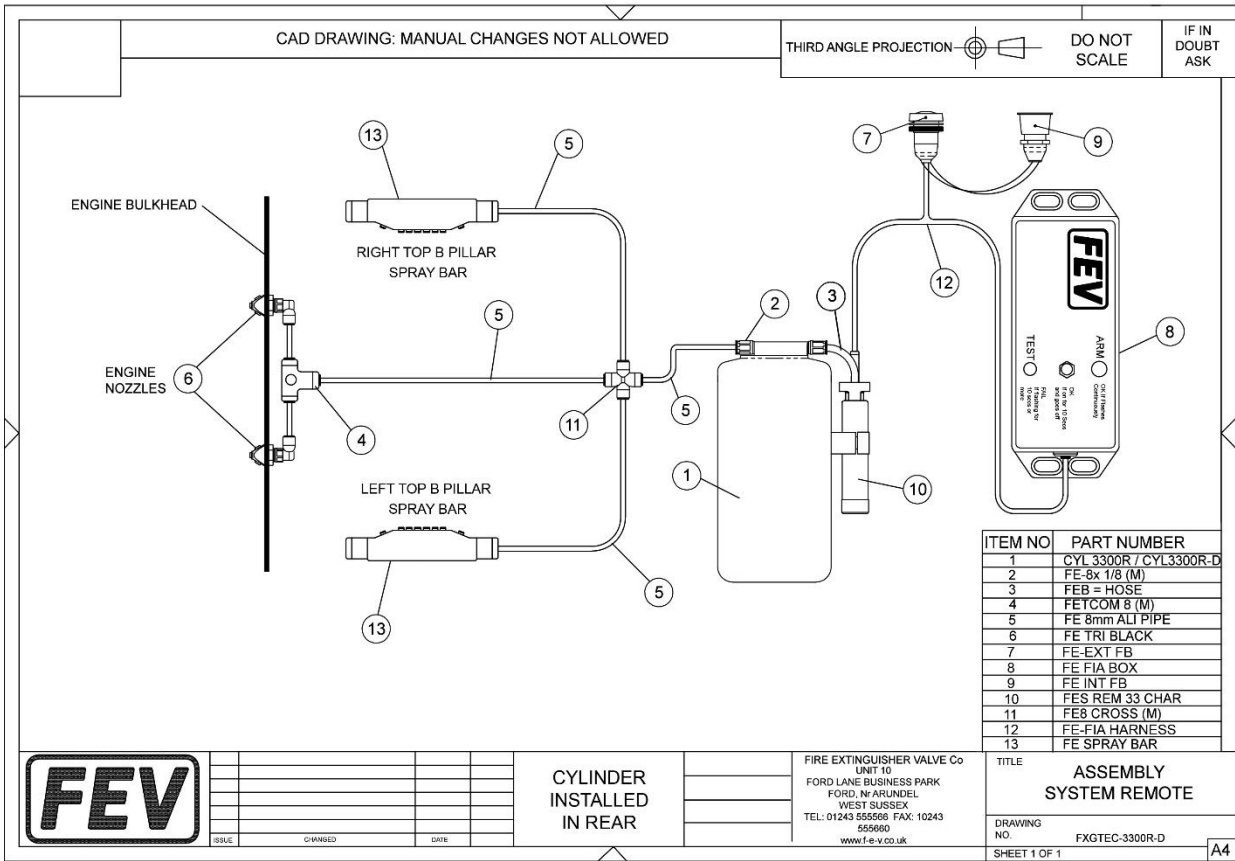
Fire Extinguisher Valve Co Ltd

Unit 10, Ford Lane Business Park, Ford, Nr Arundel, West Sussex

Tel: +44 (0) 1243 55 55 66 Fax: +44 (0) 1243 555 660

FX G-TEC3300R 18-07-17

VAT Reg No: 737 3307 34 Company Reg No: 4643893



Fire Extinguisher Valve Co Ltd  
Unit 10, Ford Lane Business Park, Ford, Nr Arundel, West Sussex  
Tel: +44 (0) 1243 55 55 66 Fax: +44 (0) 1243 555 660  
VAT Reg No: 737 3307 34 Company Reg No: 4643893

# 1. INSTALLATION DU SYSTEME D'EXTINCTION / FIRE EXTINGUISHER SYSTEM INSTALLATION

## 101. INSTALLATION DANS L'HABITACLE / COCKPIT INSTALLATION WITH CYLINDER AT FRONT

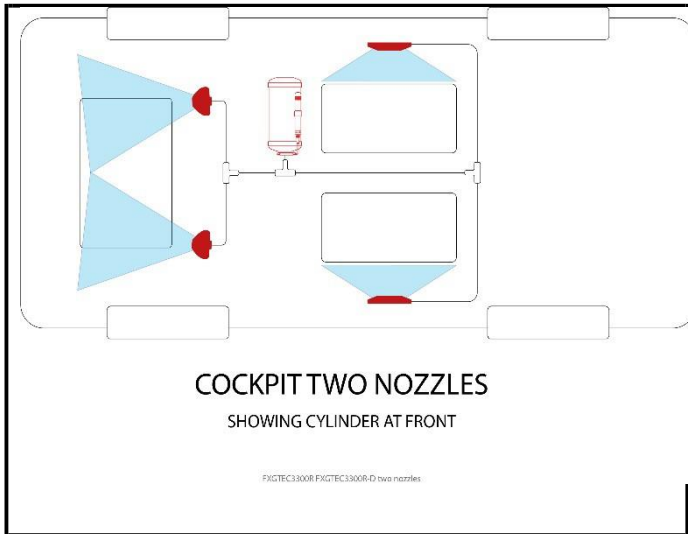
- a) Emplacement et orientation du corps  
*Location and orientation of body*
- b) Emplacement et orientation des buses  
*Location and orientation of nozzles*
- c) Précaution à prendre lors de l'installation du système  
*Special care to take with the installation of the system*

Mount horizontally in front of the passengers Seat, transversely or longitudinally.

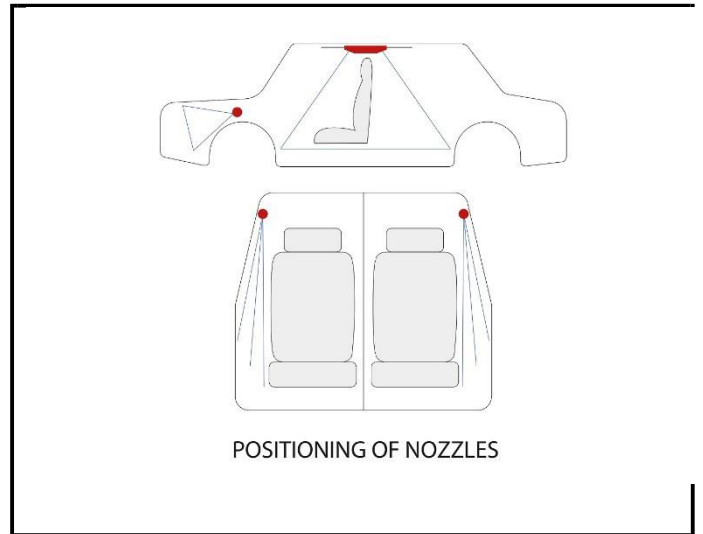
Located between side windows and seat sides at roof level on the B pillar, minimum distance of 108mm above top of seat head support (called VC)

Make sure the nozzles spray downwards between seats and side windows not towards the driver and co driver

E1-1) Installation dans l'habitacle (emplacement et orientation du corps)  
*Cockpit installation (location and orientation of body)*



E1-2) Installation dans l'habitacle (emplacement et orientation des buses)  
*Cockpit installation (location and orientation of nozzles)*



## 102. INSTALLATION DANS LE MOTEUR / ENGINE INSTALLATION

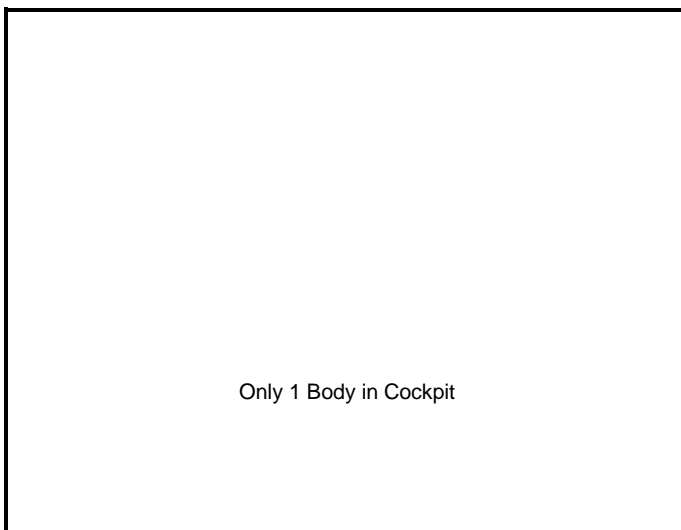
- a) Emplacement et orientation du corps  
*Location and orientation of body*
- b) Emplacement et orientation des buses  
*Location and orientation of nozzles*
- c) Précaution à prendre lors de l'installation du système  
*Special care to take with the installation of the system*

N/A

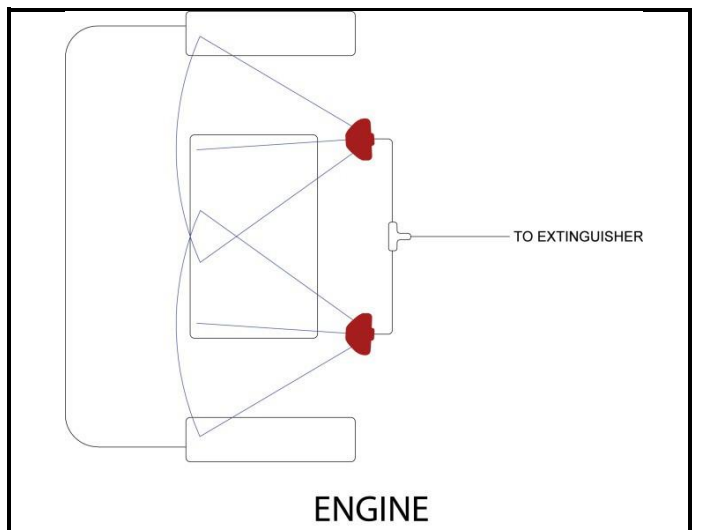
Mount through bulkhead or on pre-formed brackets approximately 300mm each side of centre only move if obstructed.

Check all connections are secure.

E2-1) Installation dans le moteur (emplacement et orientation du corps)  
*Engine installation (location and orientation of body)*



E2-2) Installation dans le moteur (emplacement et orientation des buses)  
*Engine installation (location and orientation of nozzles)*





## 1. INSTALLATION DU SYSTEME D'EXTINCTION / FIRE EXTINGUISHER SYSTEM INSTALLATION

### 101. INSTALLATION DANS L'HABITACLE / COCKPIT INSTALLATION SHOWING CYLINDER AT REAR

- Emplacement et orientation du corps  
*Location and orientation of body*
- Emplacement et orientation des buses  
*Location and orientation of nozzles*
- Précaution à prendre lors de l'installation du système  
*Special care to take with the installation of the system*

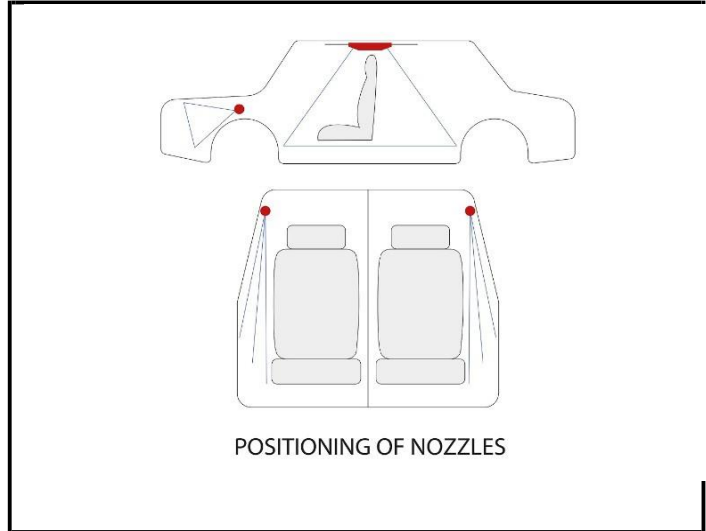
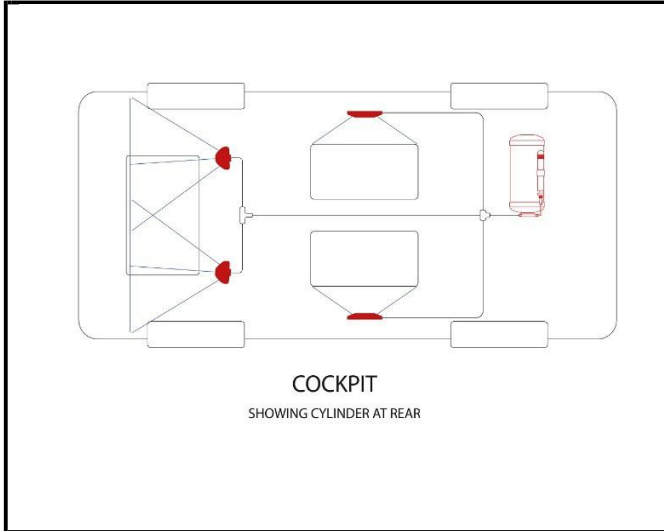
Mount horizontally behind the driver or passengers Seat, transversly or longitudinally.

Located between side windows and seat sides at roof level on the B pillar, minimum distance of 108mm above top of seat head support (calledVC)

Make sure the nozzles spray downwards between seats and side windows not towards the driver and co driver

E1-1) Installation dans l'habitacle (emplacement et orientation du corps)  
*Cockpit installation (location and orientation of body)*

E1-2) Installation dans l'habitacle (emplacement et orientation des buses)  
*Cockpit installation (location and orientation of nozzles)*



### 102. INSTALLATION DANS LE MOTEUR / ENGINE INSTALLATION

- Emplacement et orientation du corps  
*Location and orientation of body*
- Emplacement et orientation des buses  
*Location and orientation of nozzles*
- Précaution à prendre lors de l'installation du système  
*Special care to take with the installation of the system*

N/A

Mount through bulkhead or on pre-formed brackets approximately 300mm each side of centre only move if obstructed.

Check all connections are secure.

E2-1) Installation dans le moteur (emplacement et orientation du corps)  
*Engine installation (location and orientation of body)*

E2-2) Installation dans le moteur (emplacement et orientation des buses)  
*Engine installation (location and orientation of nozzles)*

