



**Fire Extinguisher System Manual for FIA Standard 8865
2 Engine Nozzles, 1 cockpit nozzle.**

N-TEC4100R3 Advanced Discharge System

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

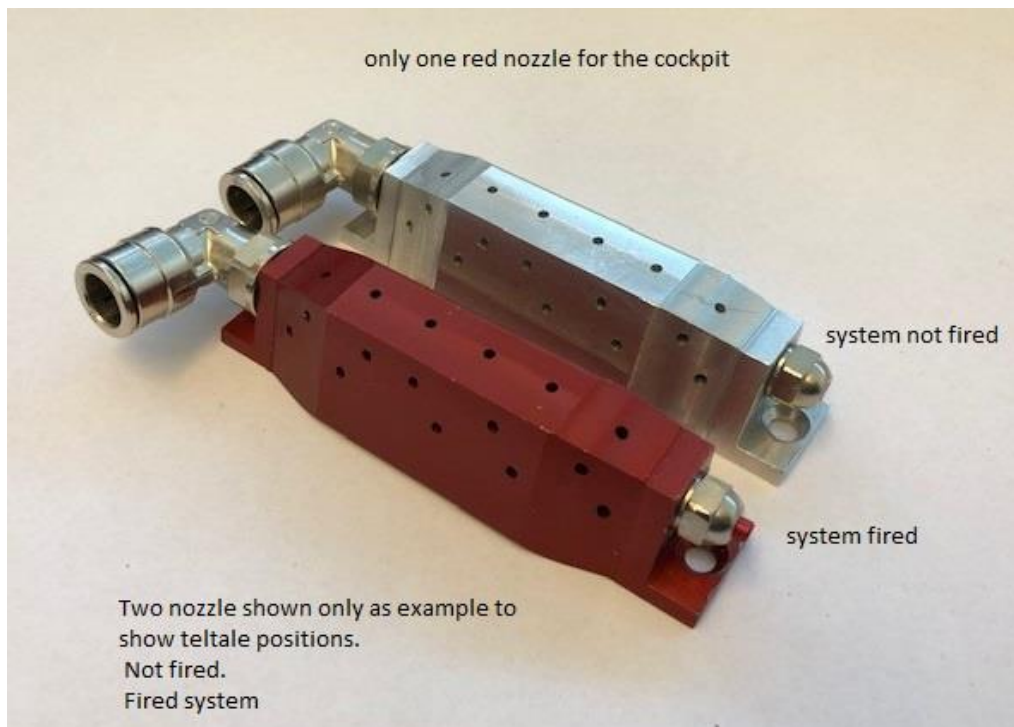
You will have to purchase a 9volt PP3 battery for the control box.

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



REMOTE CHARGE SYSTEM Knowing if the system been fired

A remote charge system has a separate pressure capsule which means that the cylinder is not pressurised until either of the two push buttons are pressed to activate the pressure capsule which will then allow pressure into the cylinder. To see if the cylinder has been activated there is a tell-tale pin in the end of the cockpit nozzle, if the system has **not** been activated the tell-tale pin is flush with its holder body, if the cylinder has been **activated** the tell-tale pin in the end of the cockpit nozzle will protrude. See photo.





Contents.

2 Plumbing schematic drawings
1 Installation instructions
1 cylinder full

N-TEC4100R-CF

2 Cradle straps	FE-CRL-S-4100	
1 Hard-line pressure hose 8 mm	FE-HL-PH-8	
1 38-gram remote charge	FE-REM-38-CHAR-4100	
4.0mtr of 10mm Aluminium tubing for cockpit	FE-ALI-10	
1.0mtr of 8 mm Aluminium tubing for engine	FE-ALI-8	
10 pipe clips	FE-P-CLIPS	
1 Cockpit 16-hole bar nozzles red	FE-16-H-BAR-NOZ-R	
2 Engine X nozzles – 8mm	FE-X-NOZ-8	
FRONT INSTALLATION		
1 Y connector 10mm metal	FE-Y-CON-10	
1 Tee connector 8mm X ¼ BSP male metal	FE-T-CON-8 x ¼ metal	
1 straight connector 10 x ¼ BSP female metal	FE-ST-CON-10 X ¼ female metal	
REAR INSTALLATION		
1 Tee connector 10-10 metal	FE-T-CON-10	
1 Tee connector 8mm X ¼ BSP male metal	FE-T-CON-8 x ¼ metal	
1 straight connector 10 x ¼ BSP female metal	FE-ST-CON-10 X ¼ female metal	
1 straight joiner 10mm	FE-ST-J-10	optional
1 Push-in Elbow 10mm ¼ BSP	FE-ELBOW-10-1/4	optional
1 internal firing button	FE-INT-FB	
1 fire button metal shroud	FE-INT-FB-S-M	
1 External fire button & fly lead	FE-EXT-FB-FL	
1 Control box 8865	FE-CB-8865, Control box, battery not included.	
1 Control box loom	FE-CB-L-8865	



Installation of cylinder and other components.

Cylinder.

Find a suitable place either behind the drivers or co-driver's seats or in the front or under the drivers seat 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.

Plumbing connectors

Please note that if the cylinder is going to be installed in the front foot well a Tee connector must be used to change the orientation of the cylinder See contents list.

Cylinder Installed in Front

See assembly drawing in the user manual. 1 off Tee connector and 1 off Tee connector with 10mm straight adaptor.

Cylinder Installed in Rear

See assembly drawing in the user manual. 1 off Y connector, 1 off Tee connector with 10mm straight adaptor

Optional connector

1 x 10mm straight adaptor can be used to aid installation if needed. FE-ST-10-ST optional

Cockpit nozzle

The one cockpit 16 hole bar nozzle is designed to be fitted between the drivers and co driver's seat with the 10 jets facing forward and the 6 jets pointing upwards and just behind the line of the two seats towards the roof. The nozzle should be fixed by using the two fixing holes each end of the nozzle or on a preformed bracket.

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Engine nozzles.

The two engine nozzles must be fitted through the cockpit/engine bulkhead equidistance to the width of the engine bay and as near to the top as possible unless obstructed, nozzle installation hole size 13.5mm.

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, use a pipe cutter to cut the pipes and make sure the ends are square if possible de-burr the ends of the pipes, wipe a small amount of silicone grease on the pipe end then insert the pipes into the various fittings, they should push in 20mm.

See separate plumbing instructions for the complete plumbing schematics.

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 and not trapped anywhere and 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 with a metal shroud and one external with a fly lead attached. 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.

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F.E.V. CONTROL BOX - FIA 8865 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 an orange LED.

Test position LED orange

After all wiring connections have been made, test the system – put the switch into ARM position (do not press any of the firing buttons). Then move the switch in to TEST position, press either of the external or internal firing buttons. 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.

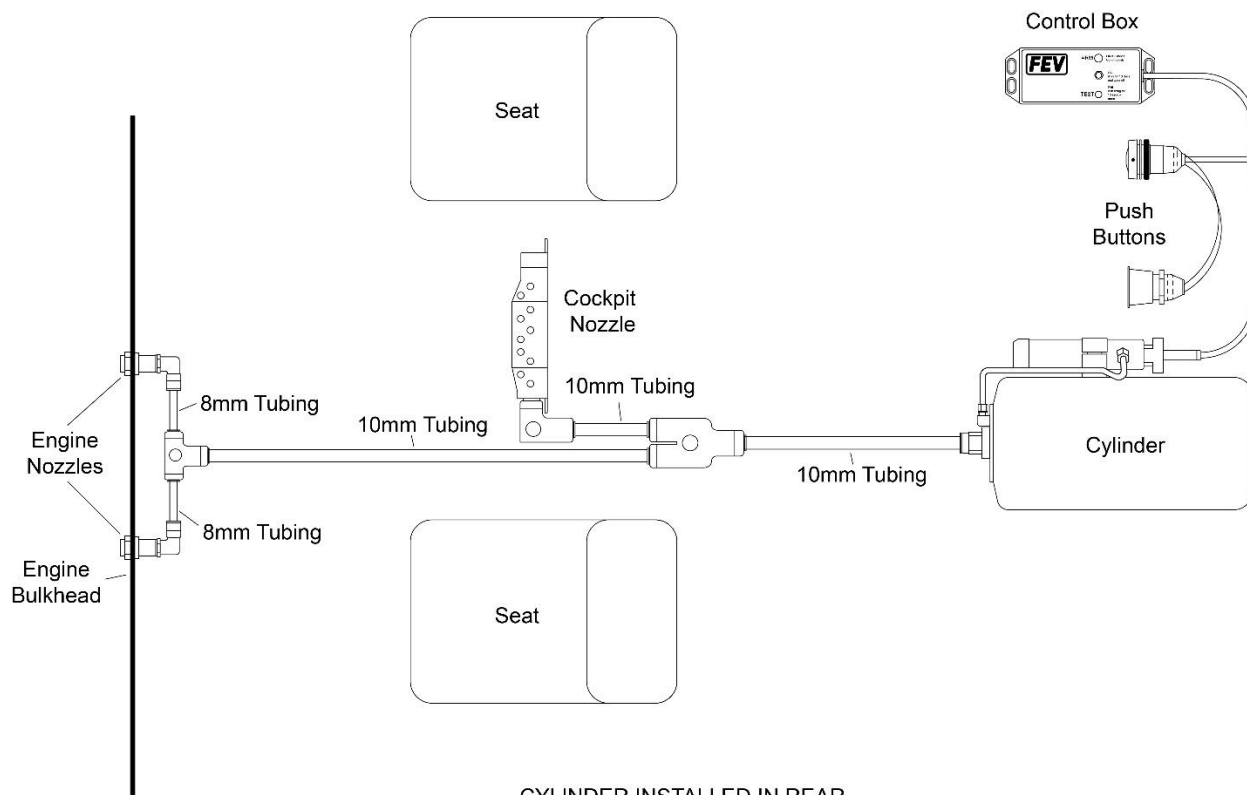
Whenever the control box is not in use, position the switch into test mode – all the lights are off - this will enable the control box to go into sleep mode and save battery, however even in sleep mode the battery will drain. **WE WOULD THEREFORE RECOMMEND THAT THE BATTERY IS FITTED JUST BEFORE SCRUTINEERING/RACING AND IS REMOVED IMMEDIATELY AFTER THE RACE.**

Preparation for race

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

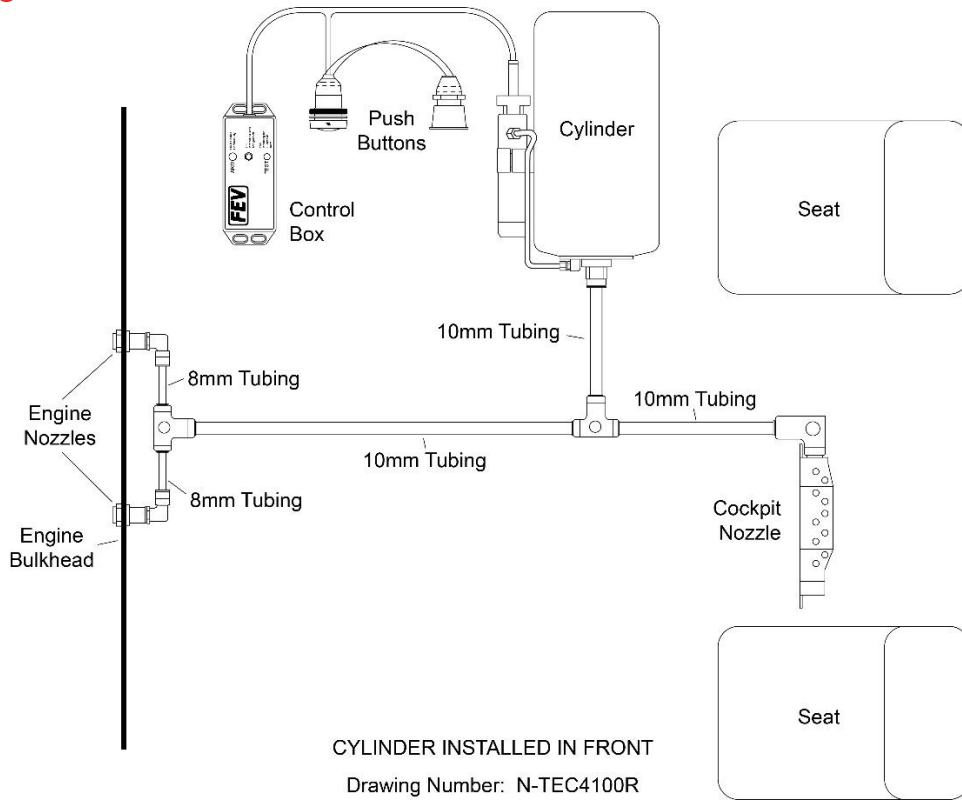
Battery fitment

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



CYLINDER INSTALLED IN REAR

Drawing Number: N-TEC4100R



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

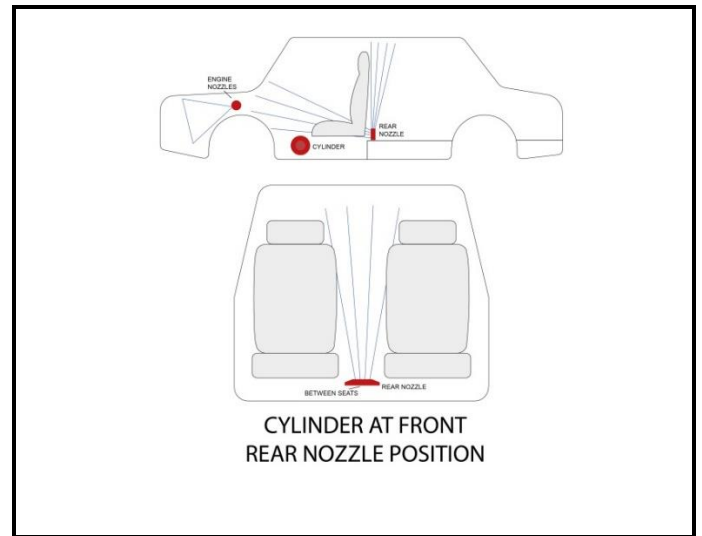
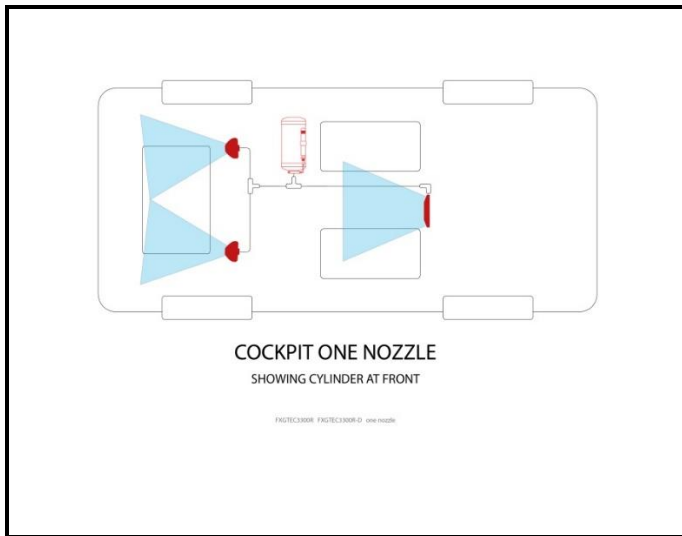
- a) Emplacement et orientation du corps
Location and orientation of body
- b) Emplacement et orientation des buses
Location and orientation of nozzles
- c) Précaution à prendre lors de l'installation du système
Special care to take with the installation of the system

Find a suitable place either behind the drivers or co-driver's seat or in front or under the drivers seat to fix the fire extinguisher cylinder, fix transversely or horizontally

Located between passenger and drivers seats

Make sure the nozzle is installed onto the floor with 10 jets facing forward and 6 jets pointing towards the roof just behind back of seats
E1-2) Installation dans l'habitacle (emplacement et orientation des buses)
Cockpit installation (location and orientation of nozzles)

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



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

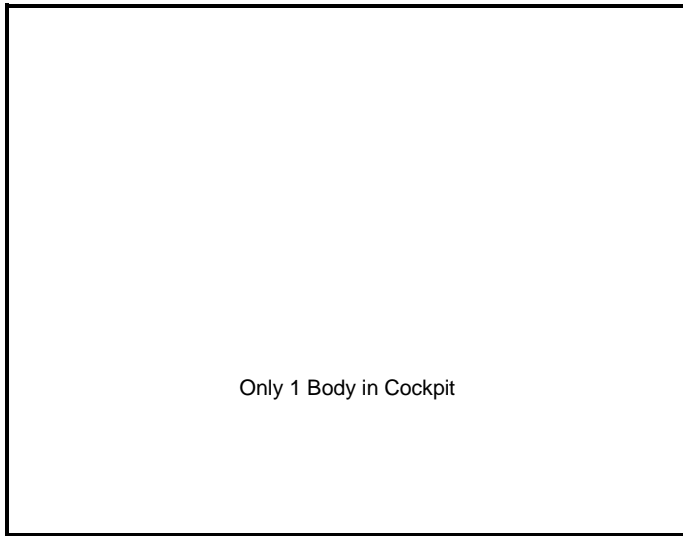
Mount through bulkhead or on pre-formed brackets equidistance to the width of the engine bay and as high as possible.

Check all connections are secure.



E2-1) Installation dans le moteur (emplacement et orientation du corps)

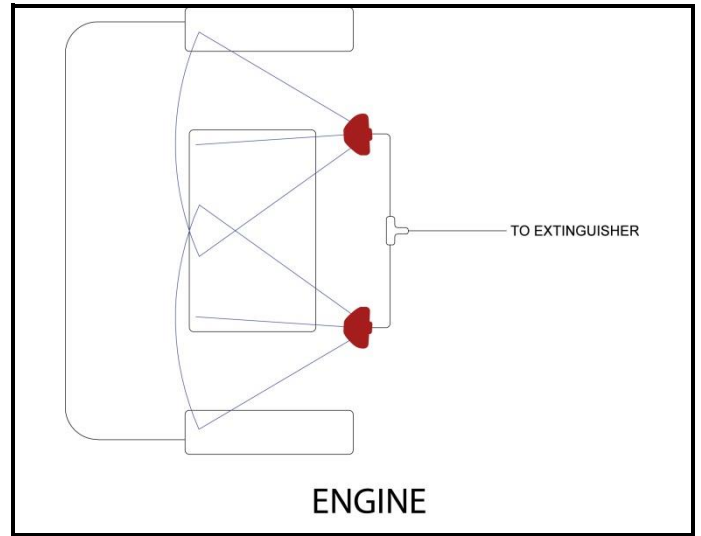
Engine installation (location and orientation of body)



8891219-2 Test Report.

E2-2) Installation dans le moteur (emplacement et orientation des buses)

Engine installation (location and orientation of nozzles)



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