



**ROTAREX**  
**FIRETEC**



## PRODUCT PRESENTATION **COMPACT LINE SYSTEMS**



**A LIQUID AGENT TECHNOLOGY  
FOR BOTH NEW VEHICLE & RETROFITTING**

**!! THE MOST COMPACT, EFFICIENT, RELIABLE & AFFORDABLE SYSTEM ON THE MARKET !!**



# OUR SOLUTION:

## COMPACT LINE SYSTEMS

1

### AUTOMATIC DETECTION

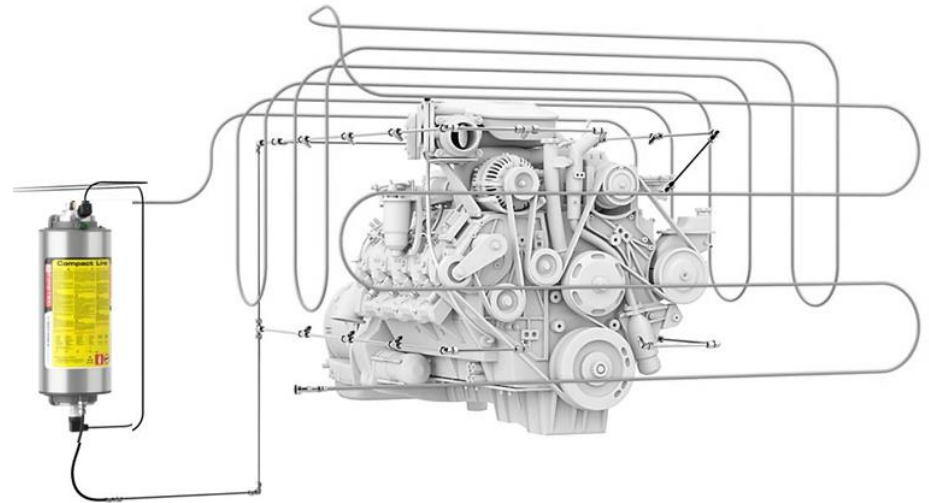
- Via pneumatic detector
- Via electronic detector

2

### AUTOMATIC SUPPRESSION

3

### IMMEDIATE DRIVER WARNING



#### Critical points protected:

- ✓ Injectors
- ✓ Manifold/Muffler
- ✓ Turbocharger
- ✓ Fuel hoses
- ✓ Battery
- ✓ Electrical control units
- ✓ Auxiliary heater
- ✓ Hydraulic lines
- ✓ Generators
- ✓ Air conditioner

# OUR SOLUTION: COMPACT LINE SYSTEMS

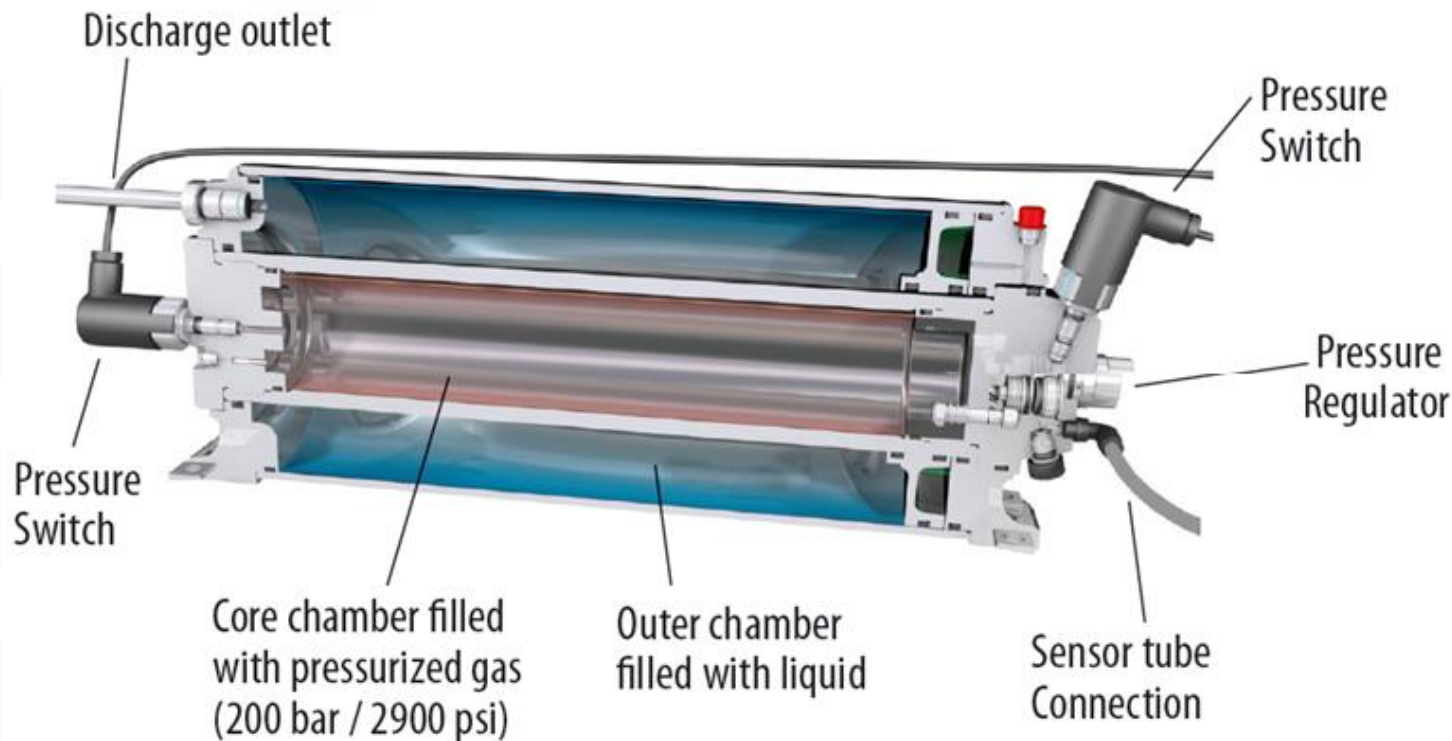


SUPERIOR RESISTANCE TO  
VIBRATION AND IMPACTS

SUPERIOR SAFETY  
*High pressure core is protected*

HORIZONTAL OR  
VERTICAL MOUNTING

EASY INTEGRATION DUE  
TO COMPACT DESIGN

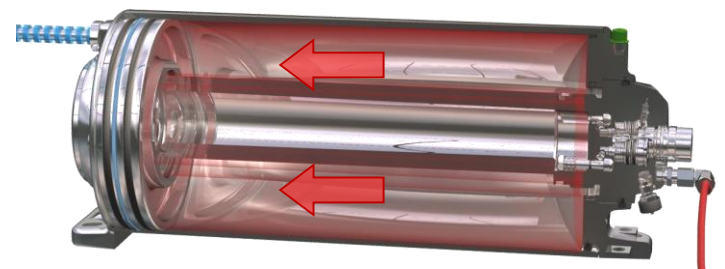
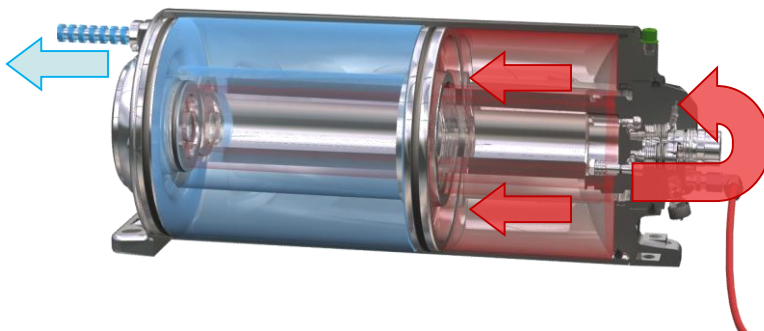
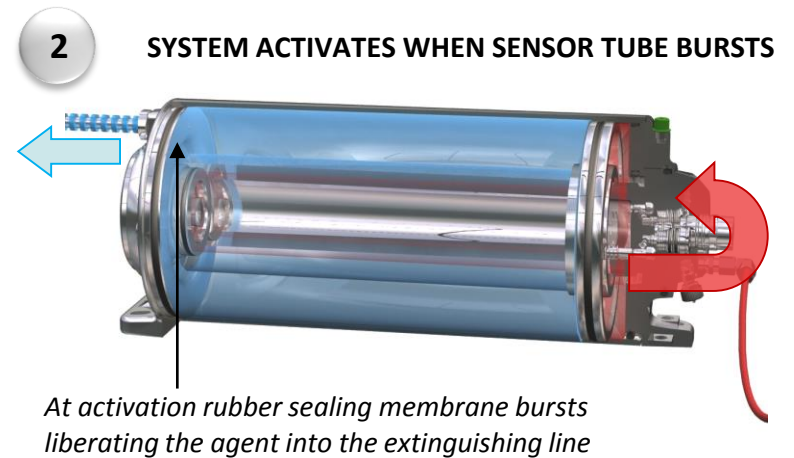
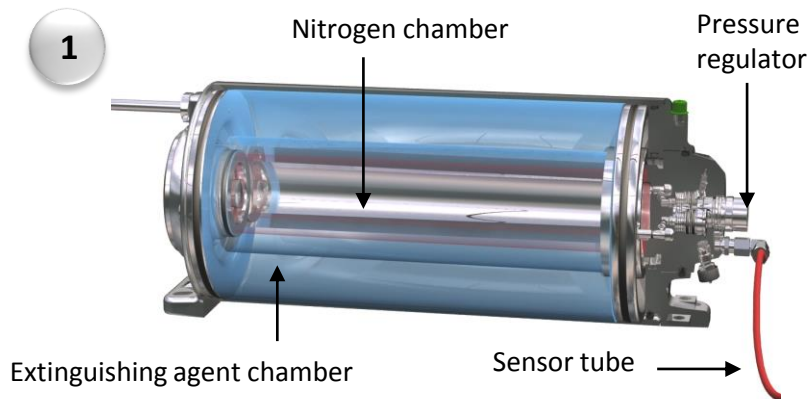


**... AN INNOVATIVE TECHNOLOGY**



# COMPACT LINE

## SYSTEM FUNCTION







# OUR SOLUTION:

## COMPACT LINE SYSTEMS

### 4 LITER COMPACT LINE

<4m<sup>3</sup>



Material	Aluminum
Working temperatures	-35°C to 80°C
Extinguishing agent pressure	±35 bar
Internal cylinder pressure	200 bar
Norm	π / TPED
Dimensions	38 x 19 x 19 cm
Weight (filled)	± 14 kg

### 7 LITER COMPACT LINE

>4m<sup>3</sup>



Material	Aluminum
Working temperatures	-35°C to 80°C
Extinguishing agent pressure	±35 bar
Internal cylinder pressure	200 bar
Norm	π / TPED
Dimensions	60 x 19 x 19 cm
Weight (filled)	± 20 kg

### 12 LITER COMPACT LINE

Big Bus and Off-Road



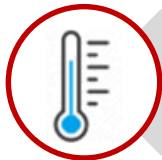
Material	Aluminum
Working temperatures	-35°C to 80°C
Extinguishing agent pressure	±35 bar
Internal cylinder pressure	200 bar
Norm	π / TPED
Dimensions	83 x 19 x 19 cm
Weight (filled)	± 30 kg



# CHOICE OF EXTINGUISHING AGENTS



LIQUID-BASED AGENT WITH  
GLYCOL-FREE ANTIFREEZE



LOW FREEZING POINT (-55°C)



QUICKLY REMOVES HEAT AND  
PREVENTS REIGNITION



BIOLOGICAL FOAM  
CONCENTRATE

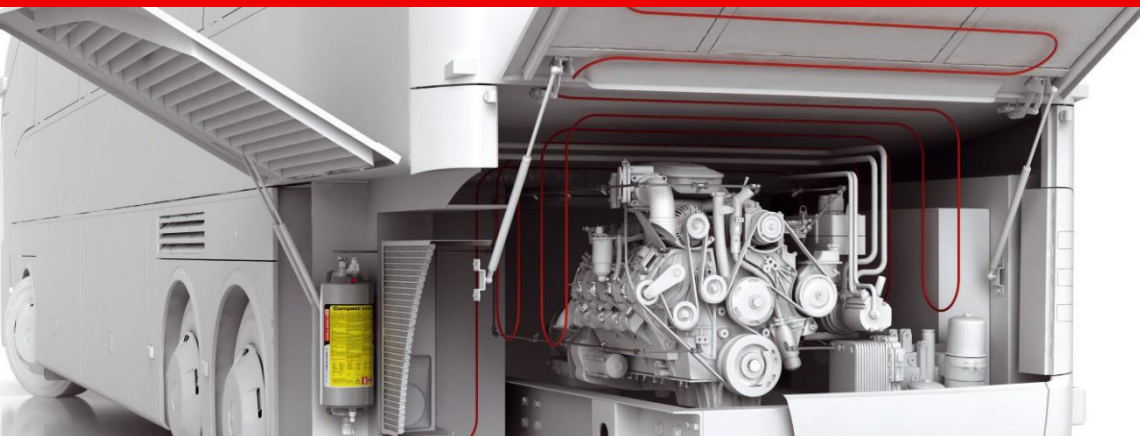


FLUOR FREE



QUICKLY REMOVES HEAT AND  
PREVENTS REIGNITION





# OPTION 1: PNEUMATIC DETECTION

1

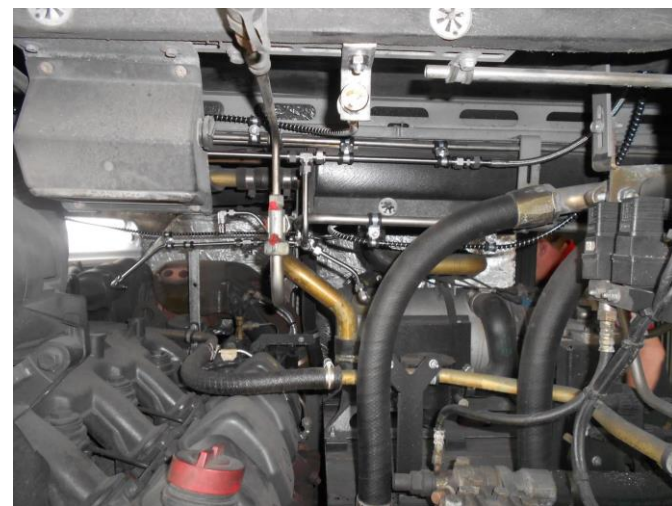
## QUICK AND EASY INSTALLATION INSIDE EQUIPMENT

- Closer to the source ←
- Compact and Flexible ←
- Linear pneumatic detection ←
- Advanced technology polymer construction ←

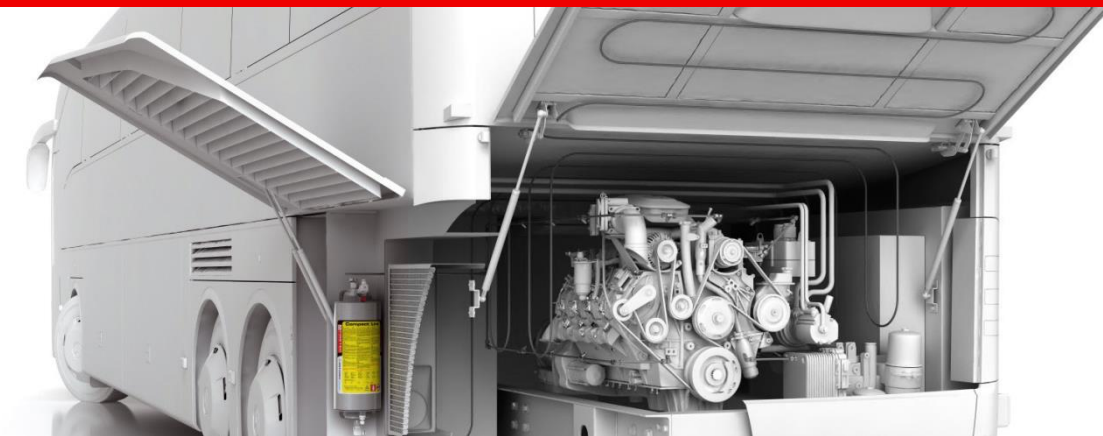
2

## QUICKLY DETECTS AND SUPPRESSES FIRES

- The tube is pressurized to 16 bar ←
- It bursts at 110° C – at early sign of fire ←
- The drop in pressure instantly actuates the valve ←
- Extinguishing agent floods the compartment ←
- The fire is suppressed in just seconds ←



# OPTION 2: ELECTRICAL DETECTION



INTEGRATED  
SOLENOID

1

## QUICK AND EASY CONNECTION TO EXISTING ELECTRONIC DETECTION

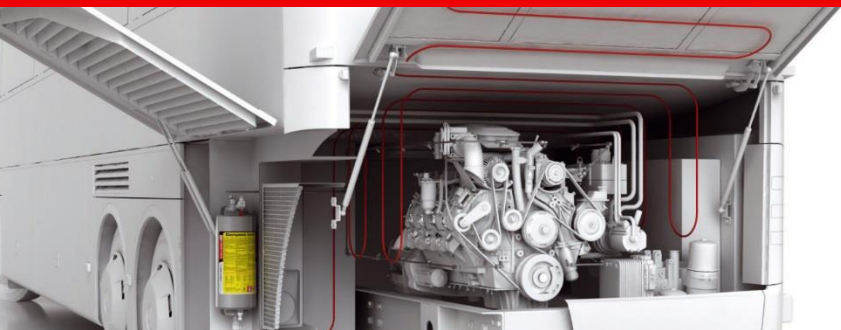
Integrated solenoid on the compact line cylinder ←  
Plug-&-Play connection to the solenoid actuator ←

2

## QUICKLY SUPPRESSES FIRES

The electronic detector sends a signal to the solenoid valve ←  
Actuation of the special pressure differential valve ←  
Extinguishing agent floods the compartment ←  
The fire is suppressed in just seconds ←





# ACCESSORIES:

## MONITORING DASHBOARD FOR ELECTRONIC DETECTION

### OK SIGNAL

- Armed and under pressure system

### ERROR SIGNAL

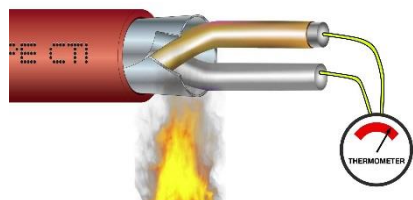
- Leakage or Overheat problems
- Maintenance is needed

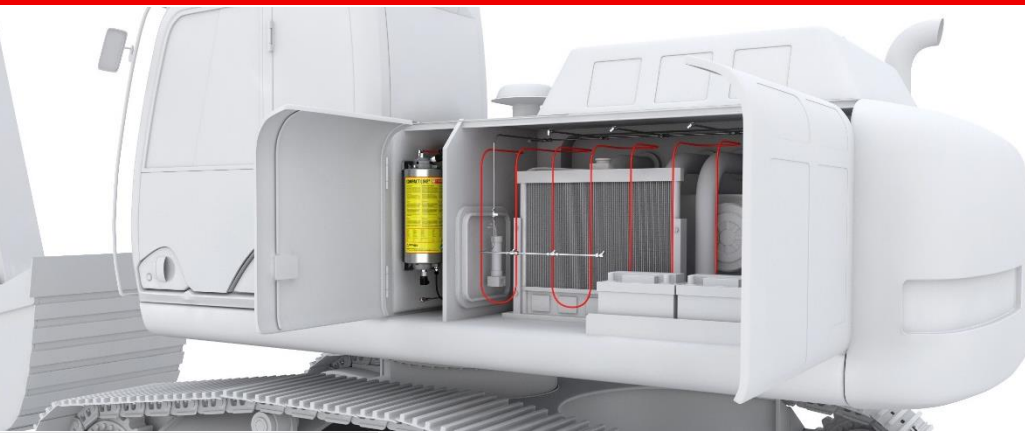
### ALARM/DISCHARGE SIGNAL

- Fire / system discharge

### SMS TRANSMISSION

- In case of event SMS message will be sent to monitoring platform
- Maintenance Management





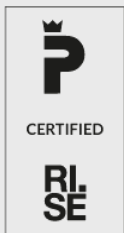
# CERTIFICATION

## ACCORDING TO INTERNATIONAL STANDARDS

### COMPACT LINE CERTIFICATIONS



UNECE R 107



SPCR 183



### COMPACT LINE IS COMPLIANT WITH:

- different certifications & test methods for buses:
  - [SP 4912, edition 3](#), a harmonized test method for AFSS units in bus engines
  - [SPCR 183](#), the world's first certification for AFSS units in bus engines
  - [UNECE R107](#) regulation, considering AFSS units as mandatory bus components

- Historical background of busses protection:

These standards are the result of a project initiated in 2005 under the mandate of the UNECE:

- Objective: Create harmonized global standards to improve bus fire safety
- Project led via:
  - transit authorities
  - insurance companies
  - bus associations & manufacturers



- one of the most recognized certifications for any off-road vehicle protection that is mandatory in Finland:
  - [FA 127:16 \(previously FK 127:2012\)](#): Guidelines for fire protection on forest and construction vehicles (like the Swedish SBF 127)



# CERTIFICATION

**UNECE R 107**

*In details*

## COMPACT LINE CERTIFICATION



## UNECE R 107

### What is UNECE R 107 regulation about ?

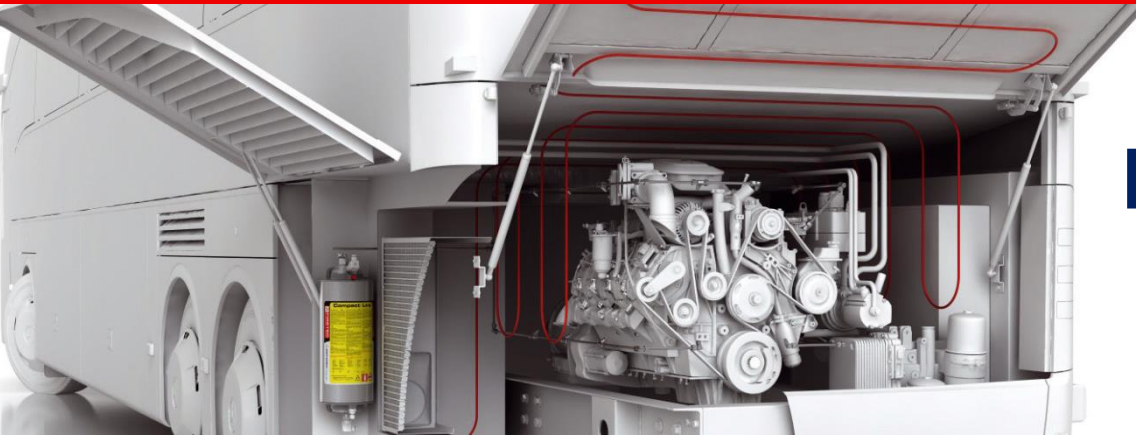
- Legislation towards improved fire safety in buses & coaches
- 37 countries (EU + Russia + Turkey + Egypt)
- Fixed installed fire supr. sys (FSS) will be part of the bus manufacturer's vehicle approval

### Who is concerned ?

- R 107 apply to vehicles exceeding 22 passengers
  - Class I (standing passengers)
  - Class II (City buses)
  - Class III (seated passengers & Coaches)

### When will R 107 be compulsory ?

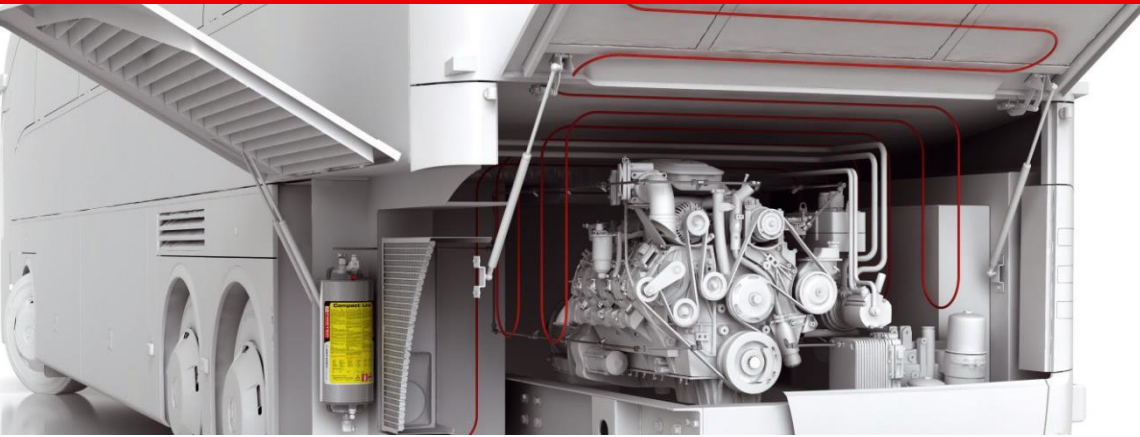
- July 11th 2018 New Bus Class III
- September 1st 2020 New Bus Class I & II



# A PROVEN PARTNERSHIP ON NEW VEHICLES & RETROFITTINGS



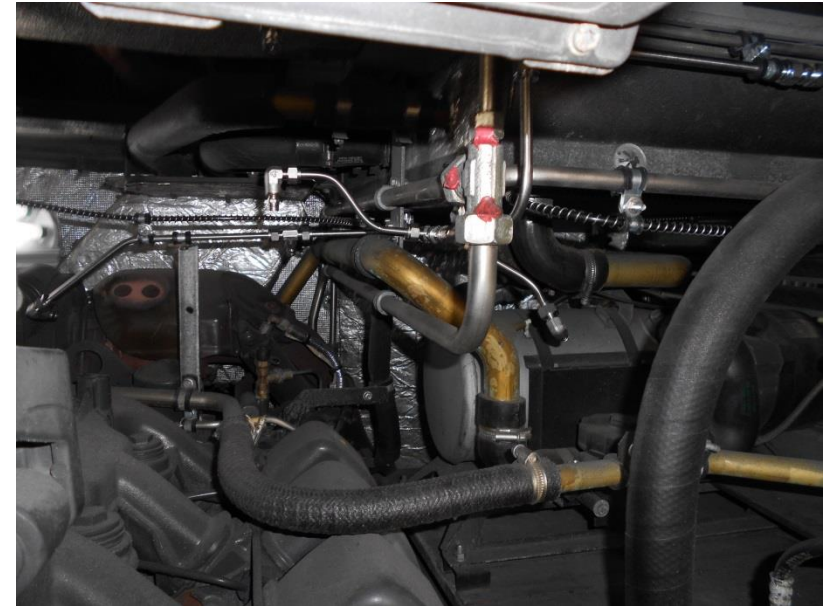
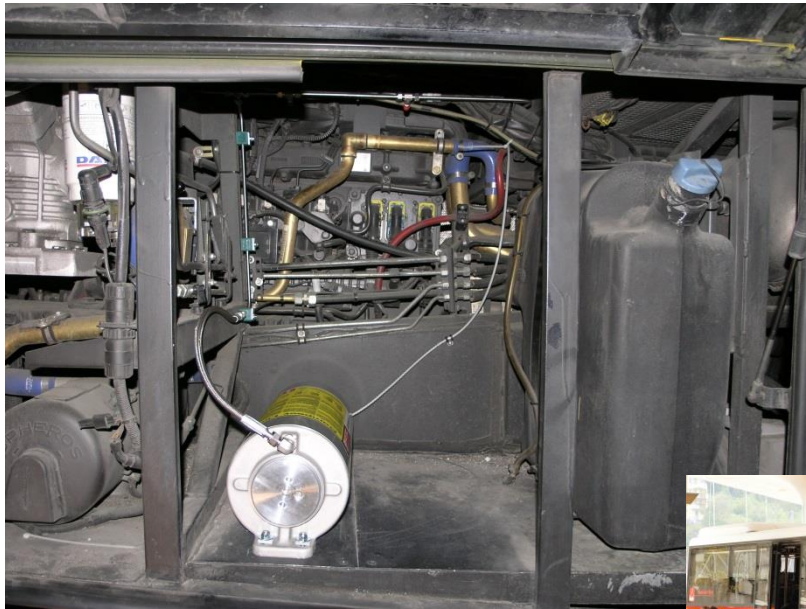




# COMPACT LINE

## APPLICATIONS

### BUS



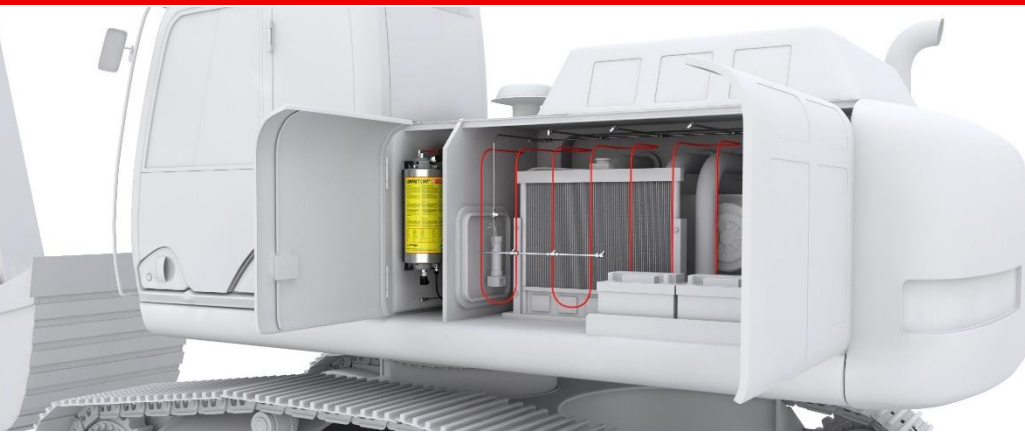
*Bus engines*



# COMPACT LINE

## APPLICATIONS

### AIRPORT VEHICLES



*Fire trucks – Varsaw Airport*

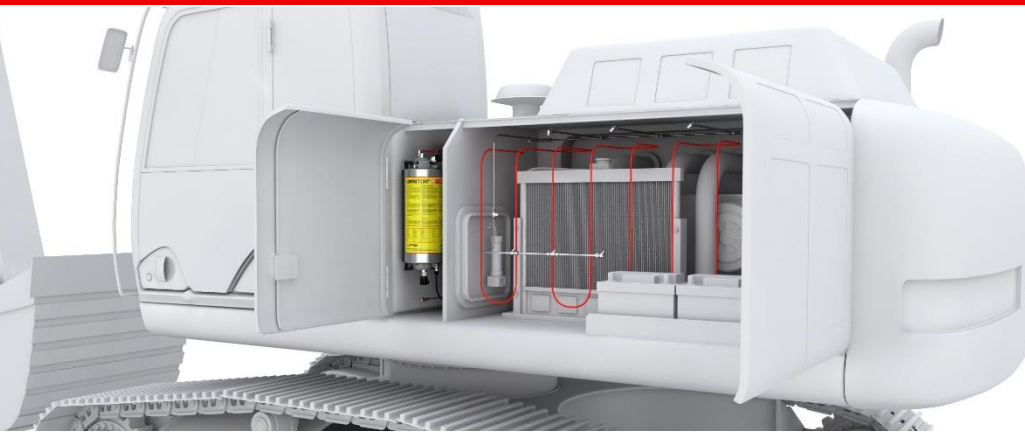


*Power Push Units – Air France*



# COMPACT LINE

## APPLICATIONS OFFROAD VEHICLES



*Caterpillar Digger engine*



*Terex Telehandlers engine*





THANKS FOR YOUR ATTENTION