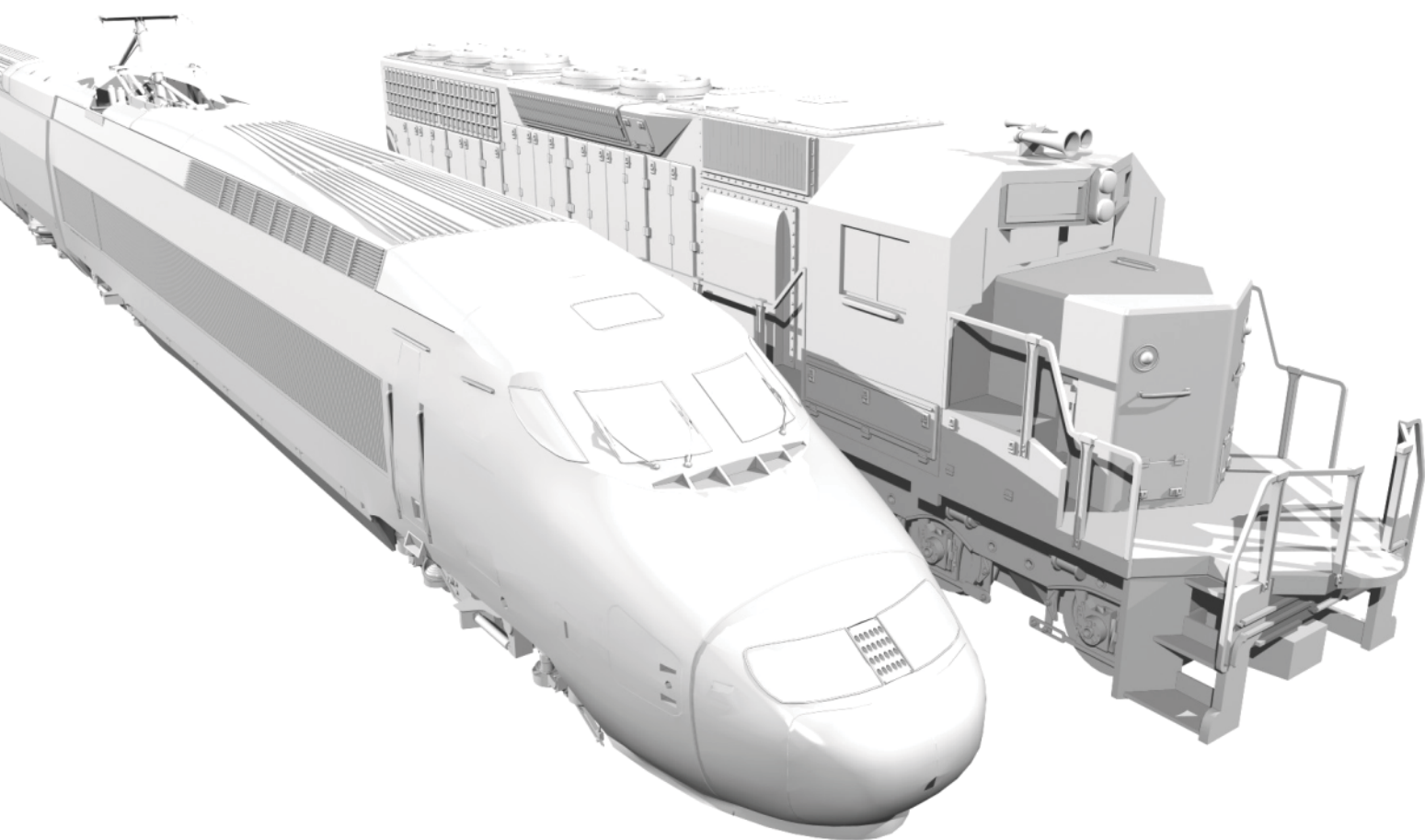




**ROTAREX**  
FIRETEC



FIRE SUPPRESSION SYSTEMS FOR TRAINS

# GREAT RISK IN CASE OF FIRE

## TRAIN ENGINE COMPARTMENTS ARE HIGH-RISK ZONES



- + Diesel Fuel leaks or oil residue on hot surfaces
- + Overheating of electric train motors
- + Short circuit or overheating of high-voltage electrical contacts
- + Fires in Underground train or Tunnels are particularly dangerous

### TRAIN FIRES CAN:

- Injure or kill passengers
- Make expensive damage to equipment
- Ignite hazardous cargo - explosion, poisonous fume hazard
- Destroy the train tracks - requiring costly downtime for repairs
- Spread to start a bushfire (remote areas far from help)

# HIGH VALUE LOSS

## THE LOSSES ARE NOT LIMITED TO THE TRAIN



- + The loss of a train is a high value loss
- + The destruction of the merchandise can represent a higher loss
- + The shutdown of an entire railway for days will be an even greater loss
- + A fire could even destroy an entire train station with many trains, buildings, warehouses, infrastructure and merchandise.

... DON'T LET THIS HAPPEN TO YOU!

# INTRODUCING

## FIRE SUPPRESSION SYSTEMS FOR TRAINS

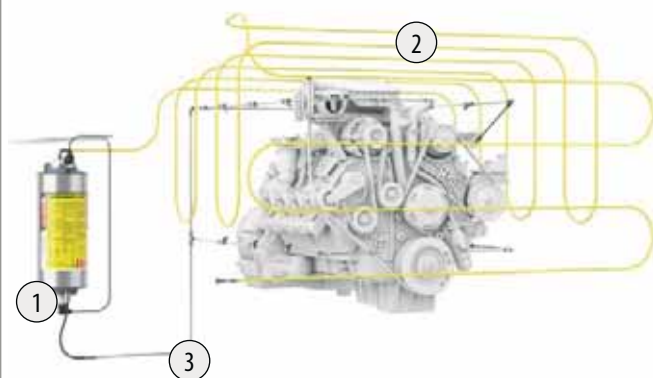


- + Automatically detects and suppresses engine and mechanical fires
- + Installs directly around the engine closer to where a fire can start
- + Works quickly, before a fire can damage equipment
- + Easy / Flexible installation
- + Simple design - no electrical supply needed
- + Highly economical
- + Works on all railway vehicles (train, metro, tram..)
- + Can even protect a freight wagon separately, autonomously



# HOW IT WORKS

**CRITICAL ZONES TO PROTECT:  
ENGINE, GENERATORS,  
ELECTRICAL SYSTEMS,  
HYDRAULICS**



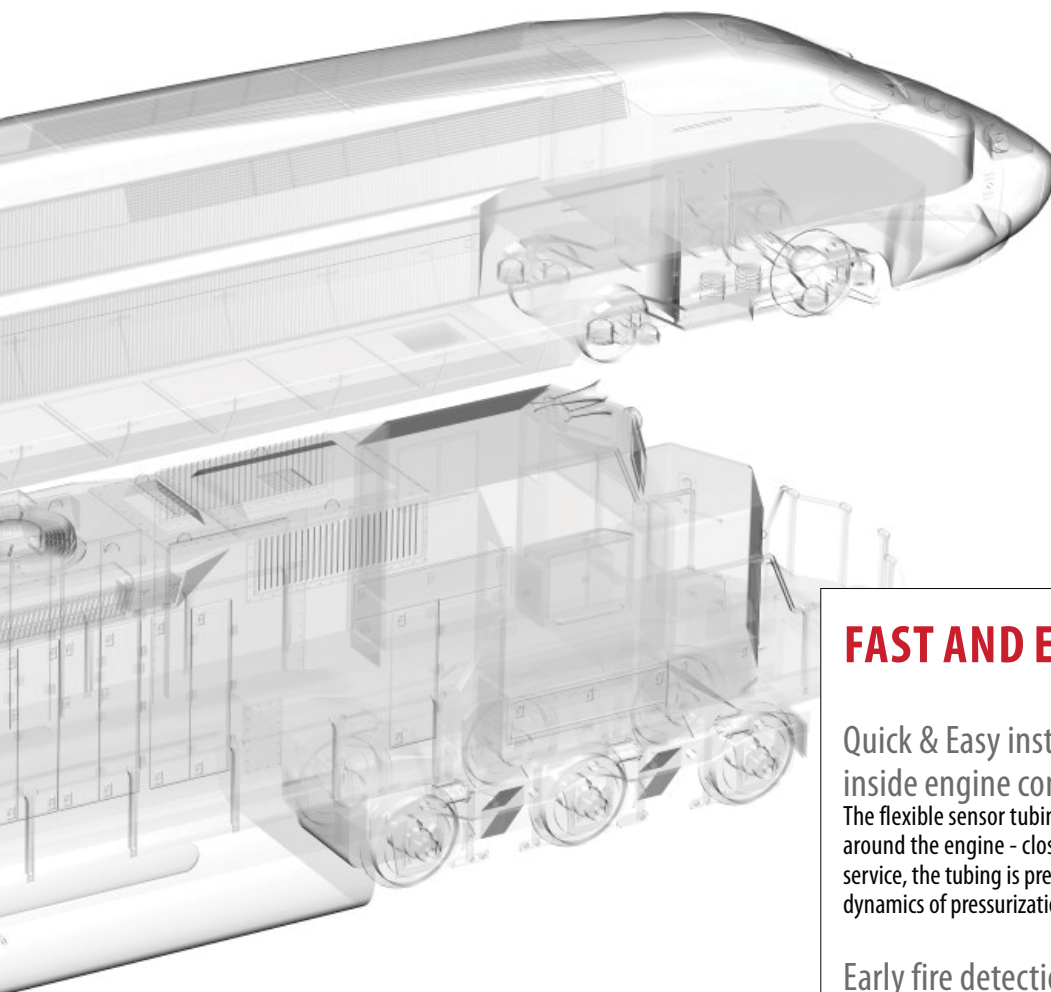
**1 FIREDETEC DUAL CHAMBER CYLINDER**  
Mounts in any position

**2 FIREDETEC PNEUMATIC DETECTION TUBING**  
Weaves around and above critical risk areas - even in small and hard to reach places.

**3 FIREDETEC DISCHARGE TUBING AND NOZZLES**  
Up to 10 nozzles placed above critical risk areas to instantly flood the zone with extinguishing agent and suppress the fire.

## **PATENTED DUAL-CHAMBER CYLINDER**

- + WITHSTANDS VIBRATIONS & MOVEMENTS
- + ALLOWS VERTICAL OR HORIZONTAL MOUNTING
- + SUPERIOR SAFETY AND LEAK PREVENTION



## FAST AND EFFECTIVE

### Quick & Easy installation directly inside engine compartments:

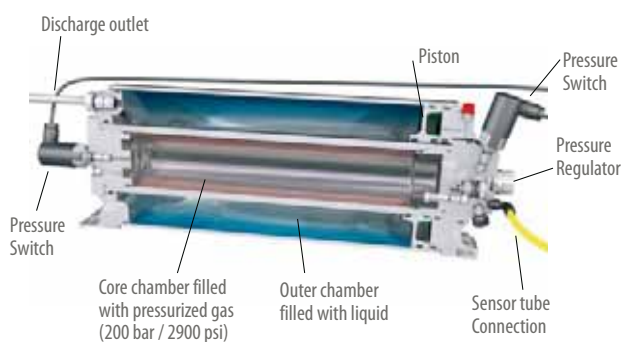
The flexible sensor tubing is easily installed directly above and around the engine - closer to where a fire could start. When in service, the tubing is pressurized with dry nitrogen to 16 bar. The dynamics of pressurization make the tubing more reactive to heat.

### Early fire detection:

If a fire occurs, the heat of the fire causes the pressurized sensor tube to burst at the hottest spot (approx. 170°C)

### Instant suppression:

The sudden tube depressurization actuates the special pressure differential valve and instantly floods the entire engine compartment with FireDETEC® TS55 ea extinguishing agent. The fire is quickly suppressed just moments after it began... minimizing damage and downtime.



- For safety, extinguishing liquid and pressurized gas are in separate chambers
- When activated, the pressurized gas is released into the outer chamber forcing against a piston.
- The piston pushes the liquid out through the discharge tube
- A built-in pressure regulator ensures a constant and sustained discharge



**A MANUAL ACTUATOR CAN BE MOUNTED ON THE DASHBOARD**

# HIGHLY ECONOMICAL



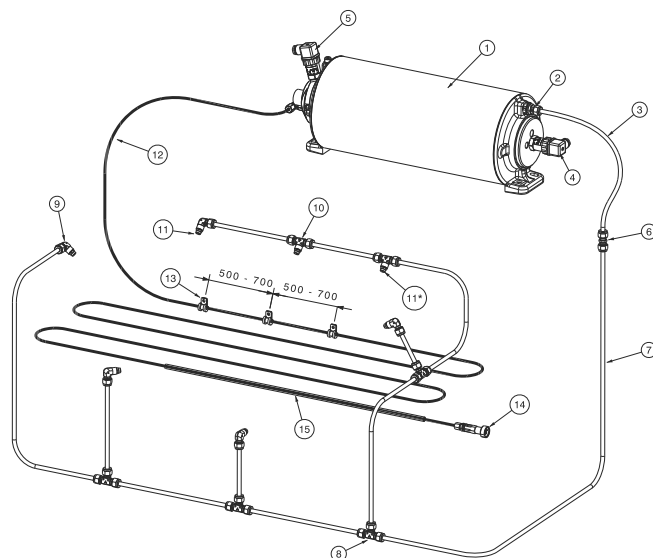
- + 24/7 protection for about \$ 2/day
- + Keeps your train and track operational
- + Minimizes repairs
- + Prevents major salvaging operations
- + Prevents damage to other equipment
- + Prevents injuries

## A COMPLETE SYSTEM SOLUTION

- + Everything you need in one box
- + Easy to install
- + Easy to Maintain

Pos.	Qty.	Description
1	1	Special IHP cylinder/valve unit (unfilled)
2	1	Tube fitting
3	1	Rubber hoses
4	1	Pressure switch (160 bar)
5	1	Pressure switch (5 bar)
6	4	Tube fitting - straight
7	5	Stainless steel pipe (1 meter)
8	4	Tube fitting - tee
9	5	Nozzle fitting - threaded elbow
10	2	Nozzle fitting - threaded tee
11	7	Spray nozzle
12	1	FireDETEC® tube (black, 10m)
13	30	Screw clip for tube attachment
14	1	End of line adapter
15	1	Protection spring for sensor tubing

\*Mount nozzles with PTFE band



# WORLDWIDE INSTALLATIONS



## PROVEN EFFECTIVE

**FireDETEC vehicle engine systems have been thoroughly tested and validated.**

**WORLDWIDE HEADQUARTERS**

24, rue de Diekirch, BP 19  
 L-7505 Lintgen  
 Luxembourg  
 Tel.: +352 32 78 32-1  
 Fax: +352 32 78 32-854  
 E-mail: [info@firetec.rotarex.com](mailto:info@firetec.rotarex.com)

**SOUTH AMERICA HEADQUARTERS**

Estr. Municipal Gov. Mario Covas, S/N  
 13279-411 Macuco-Valinhos  
 Sao Paulo, Brazil  
 Tel.: +55 19 3518/0800  
 Fax: +55 19 3869 1503

# IDEAL FOR ALL VEHICLES, MACHINERY & HEAVY EQUIPMENT

