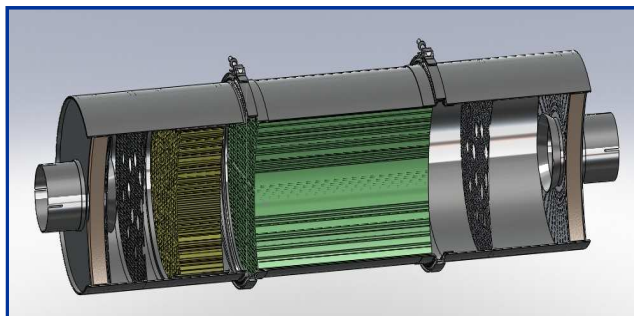




## Astra - cCRF System

### catalysed continuously regenerating diesel particulate filter

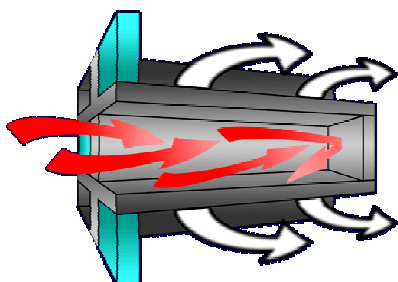
**The Astra cCRF system is a second generation** continuously regenerating diesel particulate filter (or trap) for heavy commercial vehicles & buses.



**Astra cCRF systems** are manufactured in high grade stainless steel and are modular in design, allowing easy service access to the filter element.

**Astra cCRF employs a "passive" regeneration method requiring no additives, thus utilising advanced gas exchange techniques.** During normal vehicle operation, frequent excursions to high exhaust temperatures, allow the activity of a precious metal coated catalyst to oxidise NO to NO<sub>2</sub>. NO<sub>2</sub> subsequently acts as the catalyst to ensure that soot particles combust as they are collected in the filter.

**Astra cCRF systems** are truly "second generation" technology as they employ a combination of the latest high activity, fast reacting stainless steel oxidation catalysts, with the proven durability of high efficiency Silicon Carbide particulate filters. Astra cCRF filters are also zone coated with a proprietary combination of base and precious metals to enhance regeneration reliability and NO<sub>x</sub> performance.



#### Key Features

- ◆ **Passive regeneration without additives**
- ◆ **Fast reacting stainless steel pre catalyst achieving gaseous reductions:-**
  - ◆ **CO > 90%**
  - ◆ **HC > 90%**
  - ◆ **NO to NO<sub>2</sub> shift <20%**
- ◆ **150 cpsi zone coated silicon carbide filter achieves:-**
  - ◆ **PM mass reduction > 90%**
  - ◆ **PM count reduction > 99%**
- ◆ **Electronic back pressure and data recording monitor, provides servicing alerts**



#### Astra Vehicle Technologies Ltd

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**A**stra cCRF filters are recommended for applications working within the following conditions:-

**Temperature requirements for passive operation:-**

- ◆ **Peak temperature : 390°C or above**
- ◆ **Ave cycle temperature : 215°C or above**
- ◆ **Time above 350°C : 5% (recommended)**
- ◆ **Time above 300°C : 20%**
- ◆ **Time above 240°C : 30%**

**Note:** if exhaust temperatures never peak above 280 – 300°C, such a vehicle application may not be suitable for this type of filter technology. In these circumstances, an Aadastra FBC DPF, fuel borne catalyst regenerated filter technology would be more suitable.

Typical applications suited to passive systems include:-

- ◆ Heavy load / speed conditions
- ◆ Long haul applications
- ◆ Mixed use cycles which include both regular high load or speed with inner city operations



**Every Astra cCRF system** includes an electronic performance monitor, analysing parameters of back pressure, temperature and running time.

LED indications on the monitor are repeated to a dash mounted indicator, alerting the operator when the filter needs cleaning.



**Maintenance**

All high efficiency filters require period cleaning. Running time between cleaning cycles vary dependent on engine condition, maintenance, and engine lubricant type\*. The Astra filter exchange scheme is a convenient means to properly service the system with minimal vehicle downtime.

\* For all DPF applications, Astra strongly recommend the use of a LowSAPS lubricating oil. Please check with the engine manufacturer for approved products

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