AWF-b particulate filter

Active regeneration with Diesel burner

AT A GLANCE

- Continuous PM trapping efficency > 99 %
- Active regeneration of your DPF as needed, regardless of engine or vehicle operation
- Full flow burner system AWF-b+ with fully automated regeneration without driver intervention
- Programmable backpressure to trigger the burning process
- Accurate control of the exhaust gas temperature during the process
- No vehicle downtime with AWF-b+
- Low fuel consumption < 1 %
- No additional consumables such as additives
- Certified system according to VERT®/Swiss BAFU and TRGS 554

The »Active-Wall-Flow-burner« (AWF-b) particulate filter system is the technical solution from Tehag for vehicles and construction machines who are operating at low load factors and therefore do not reach the minimum exhaust gas temperature requirements for passive regeneration.

Depending on the usage and customer's wishes we can offer the AWF-b system both as idle burner with manual start function or in a full version as automatic full flow burner (AWF-b+).

The system is composed of a SiC Wall-Flow substrate fixed with a heat-resistant mat inside a stainless steel housing. In the exhaust pipe before the filter element the burner system is integrated.

This includes the combustion chamber with a glow plug and connections for the supply of Diesel and air as well as 3 temperature probes for continuous monitoring of the burner function.

PRODUCT OVERVIEW

- **Active DPF**
  Passive DPF
  SCR-System
  Muffler
  Thermal isolation
  Exhaust pipes
  Catalysts
  Spark arresters
  Pipe Connection Technique

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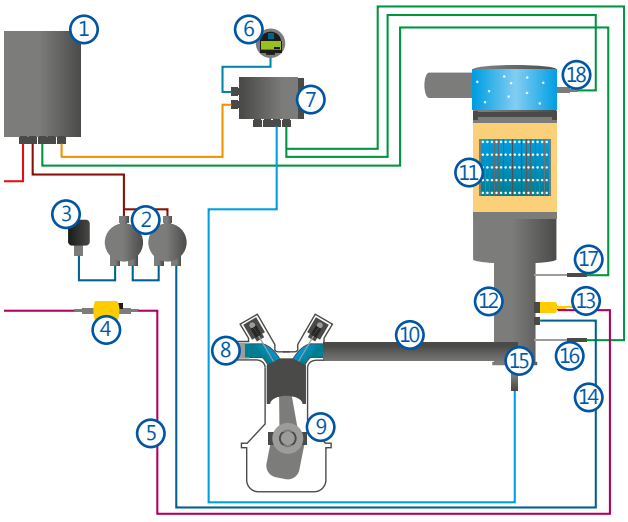
FUNCTION

In the simple AWF-b idle version the loading condition of the filter element is continuously displayed on a digital display. If the backpressure will increase up to a set point value an indication will be shown to the operator that regeneration has to be initiated. For this to happen the load should be switched off and the engine should continue to operate at idle. The burning process has to be started manually by the operator and lasts about 20 to 25 minutes depending on the degree of loading of the filter element.

During this time the engine has to operate without any load and cannot be moved.

In the full version AWF-b+ the system works completely autonomously. If the programmed value of backpressure is reached the system will start automatically the combustion process, independent of the actual operation modus of the vehicle. The vehicle can thus continue to operate without interruption even during the burning process.

AWF-b PROCESS DIAGRAM



1 AWF-b CPU
2 Air Compressor
3 Air Filter
4 Diesel Pump
5 Diesel Line
6 Monitor for temperature/backpressure
7 Filtercontrol
8 engine intake manifold
9 Engine
10 Exhaust Line
11 Diesel Particulate Filter
12 Burning Chamber
13 Glow Plug
14 Air Intake
15 Backpressure
16 Temperature 1
17 Temperature 2
18 Temperature 3

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