

A COMPARISON BETWEEN FLASH CLEANER MACHINE AND THE MOST COMMON DPF CLEANING METHODS

	DESCRIPTION	TIME	COSTS	ADVANTAGES/DISADVANTAGES
HEAT TREATMENT	Cut the DPF and put it into an oven that gradually reaches 1100 – 1300° F burning the carbon residuals. Then weld the DPF.	8-12 hours Pneumatic cleaning: 90 minutes Oven-baking: from 8 to 48 hours	Machineries: 4 - Backpressure Tester - Oven - Compressor - Aspiration cab	<ul style="list-style-type: none"> ✓ Removal of most of the PM10 deposits ✗ Risk of damaging the integrity of the filter because of the cutting and welding ✗ Melting of the cerium with the filter walls due to the high temperature ✗ Risk of thermal shock that can damage the noble metals
ULTRASONICS TREATMENT	Dip the DPF into a ultrasonic tank full of water. The ultrasonics form micro-bubbles inside which the temperature is very high and the pressure reaches 500 atm. The implosion of the bubbles causes the detachment of the particulate matter from all of the filter substrates.	12-24 hours ultrasonic cleaning + drying + pneumatic cleaning	Machineries: 3 - ultrasonic tank - Oven - Compressor	<ul style="list-style-type: none"> ✓ Deep cleaning of the filter cells ✗ Poor efficiency on very dirty filter (oil) and big-sized filters ✗ Risk of damaging the filter due to the vibrations generated by the ultrasonics and the implosion of the bubbles ✗ High water consumption (need to change it often to eliminate the PM10 cleaning residuals which deposit at the bottom.)
CHEMICAL ADDITIVES	Put the chemical additives into the vehicle tank together with the fuel in order to melt the burning residuals inside the engine and to eliminate them through the exhaust pipe.	-	Additive There is a wide range of additives; prices change according to the manufacturer and to the channels of sale. (from 20 € to 200 €)	<ul style="list-style-type: none"> ✓ Easy and cheap ✗ Ineffective: residuals are not actually eliminated and more are added to those generated by the additive itself, going to block further the particulate filter
FLASH CLEANER MACHINE	Put the filter on the worktop of the washing cabin and connect it to the water pipe. Press START: depending on the type and the size of the filter, Flash Cleaner Machine performs the washing of the filter and then dries it with hot air	from 30 minutes (car DPF-FAP) to 120 minutes (truck DPF)	Machineries: 1 Flash Cleaner Machine is a one-of-a-kind machinery that performs all of the cleaning phases (washing + drying) without cutting, oven-baking and welding.	<ul style="list-style-type: none"> ✓ Total removal of PM10 residuals ✓ Removal of oil residuals ✓ Removal of cerium residuals ✓ Efficient cleaning of all of the types of particulate filter and catalyst (cars and heavy goods vehicles, also SCR) of every size ✓ Safety of the filter ✓ Preservation of the noble metals of the DPF ✓ Processing water always clean thanks to an efficient filtration system: no need to change the water but only to add it when it evaporates. ✓ Easy, fast and cheap