

# FuelActive

## FLOATING FUEL PICKUPS

92% cleaner fuel than standard pickups

Reduce fuel consumption & CO<sub>2</sub> by ~6.94%

60 437 L fuel, 206t GHG\*

### Supercharged efficiency

Boost your filter performance by up to 5X

### Pure performance

Reduced contaminants = cleaner power, superior injector performance

### Less downtime & operating costs

Haul truck studies have proven FuelActive's remarkable capabilities



\*Average based on 730E

Shield your equipment from fuel contaminants.

### FuelActive's Promise

*Less maintenance, more performance.*

- Improve your fuel quality and filter life
- Prolong the lifespan of your injectors and fuel pumps
- 5 year standard warranty

### Applications



Trucks



Loaders



Excavators



Dozers

### Run Clean, Drive Savings

#### Slash CO<sub>2</sub> Emissions

By improving fuel efficiency, FuelActive helps in reducing CO<sub>2</sub> emissions by ~6.94% contributing to a lower carbon footprint and your environmental sustainability efforts.

#### Quick ROI, Long Service Life, Zero Maintenance

The payback period for installing FuelActive systems is remarkably short, ranging from 2 to 3 months, depending on the fleet's size and usage patterns. This quick ROI makes it a financially viable solution for fleet management.







**BENEFITS & FEATURES**



**Protect Your Engine from Contaminants**

Water, particles, and microbial growth are common fuel contaminants. These contaminants can clog fuel filters, cause fuel pump failures, and degrade injectors, leading to significant engine issues.

-  Save on fuel costs
-  Reduce emissions
-  Cut repair and maintenance costs
-  Less downtime, more productivity



**Without FuelActive**

**With FuelActive**

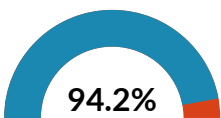
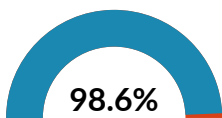
FuelActive reduces contamination reaching filters and engine, protecting sensitive components like injectors.

**FuelActive is 4x More Effective than Standard Pickup Pipes\***

**At Water Separation**

AT 3.5 MM WATER

AT 5 MM WATER



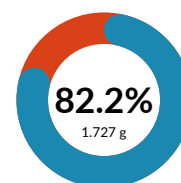
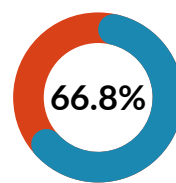
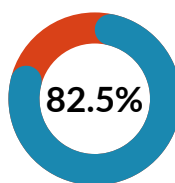
- At 3.5 mm water: Standard pipe hits just 24.4% efficiency, while FuelActive soars to 98.6%.
- At 5 mm water: FuelActive maintains 94.2% efficiency, but the standard pipe can't keep up and the engine stops.

**At Reducing Filter Contamination**

IN PRE-FILTERS

IN SECONDARY FILTERS

OVERALL



- FuelActive reduces filter contamination by 82.5% in pre-filters and 66.8% in secondary filters compared to conventional pick-ups. Across the entire filtration system, FuelActive cuts contamination by 1.727 g or 82.2%.

\*Results from Independent laboratory testing by Sogefi Filtration Ltd.





**BENEFITS & FEATURES**

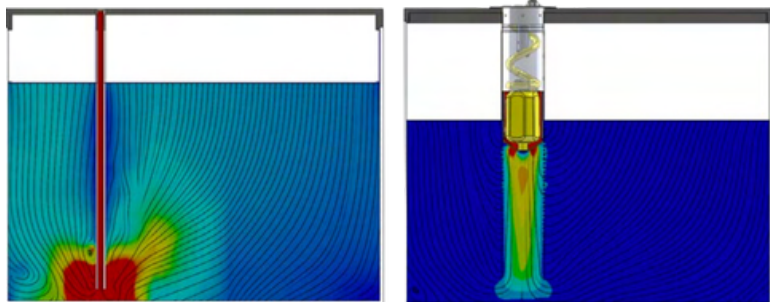
**Reduces Harmful Emissions**

FuelActive's pilot with an international mining company achieved significant reductions in underground mining emissions.

- DPM, the 'silent killer,' reduced by **17%**.
- NOx reduced by an average of **10%**.
- CO<sub>2</sub> reduced by **1.5%**.
- NOx measured at both load and idle conditions.



**Fluid Dynamics CFD Computer Simulation**



STANDARD FUEL PICK-UP PIPE

FUELACTIVE FUEL PICK-UP PIPE

FuelActive's float design with built-in diffuser reduces localized pressure minimizing the disturbance of contamination within the tank. The conventional fuel pick-up design creates a high-velocity disturbance in and around where contaminants settle (see red area).

**Simple Design, No Maintenance**



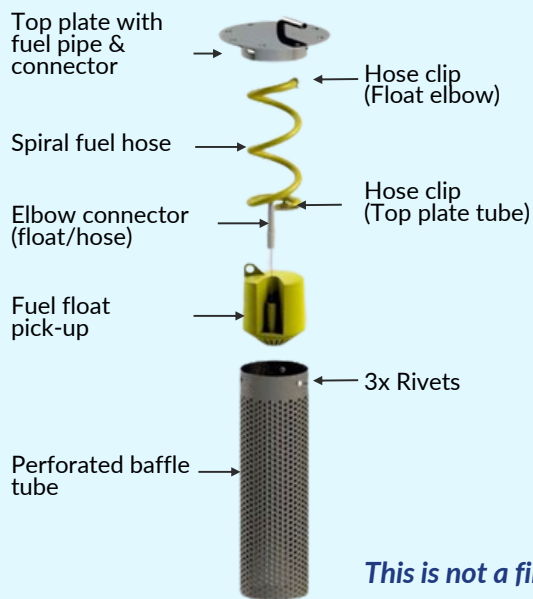
**"Fit & Forget"**  
Zero maintenance



**Simple & Robust**  
Functional parts only



**Long operational life**  
Beyond the engine/machine



*This is not a filter.*

By supplying the fuel lines with the highest quality fuel available, FuelActive protects the fuel system and significantly reduces problems associated with contaminated fuel.

Most contamination is waterborne and is approximately 15% heavier than diesel, sinking to the bottom of the fuel tank as a result.

By drawing fuel from the upper level of fuel, the FuelActive unit avoids the settled contamination at the bottom of the tank.

Units are made up of steel and plastic components which are resistant to Hydrocarbon Fuels (Diesel, Gasoline, Kerosene etc.) FuelActive has been thoroughly tested in the field and independently tested by a TS16949 registered filter company.





"Diesel is one of our biggest costs on the mine and our mobile equipment is the largest consumer of diesel. Therefore to find a product which assists in the reduction is great financially. However, more importantly, it's great to support Mafube's continued pledge to reduce energy consumption."

- Tshepiso Mapule, Digital Innovation Lead, Mafube Colliery

**Superior results**

The FuelActive outperformed similar control groups and historical data every month.

**Validated results**

Hypothesis testing validated a **95%+ chance of at least 3% in fuel savings.**



**6.94% in fuel savings**

Data point averages showed over 6.94% in fuel savings - double the expected minimum of 3%.

**Positive fuel sampling**

Mafube carried out additional fuel sampling, further validating the field trial results.



"For Komatsu Chile and our clients, the installation of FuelActive has proven to be an effective way of combating the global issue of fuel contamination in diesel powered machinery."

Jeffrey J. Dawes, President & CEO, Komatsu Cummins Chile

"The difference in filter costs is obvious but the real advantage is in reduced downtime, improved reliability and improved production levels."

Steve Woods, VP Product Support, Komatsu Cummins Chile

"When the market is down, the miners look for cost savings; when it is up, they look for asset availability. You have the perfect product because you can contribute irrespective of cycle."

Juan Pablo Bustos, Project Manager of the ESTRS Project, Escondida Mine, Chile

Trucks fitted with FuelActive were the only machines to continue operating when a batch of contaminated fuel was delivered to the mine site."

Andrew Warren, Product Support Manager, Komatsu, South America

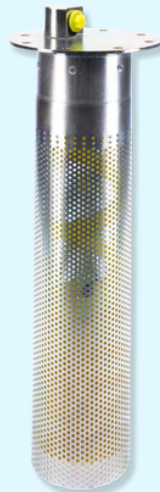


"FuelActive is a terrific solution that can add to your portfolio of products as a complement to your fuel filtration ones."

Dario Andres Nancupil Paredes, Mining Group Director, Cummins Chile

"We ran a trial in Escondida with 2 Komatsu 980 and our largest mining engine. The results were very good, we were able to move from 500 hours to 1000 hours without impact on the performance of engine. We don't lose the power, we don't lose differential pressure between stage 2 and the stage 1. FuelActive was a big collaborate to keep the system clean, without FuelActive we saw the engine turn from good condition to bad condition, we loss power, we have several fault calls and when we check the fuel line it is full of contamination. FuelActive cares for the fuel system, reduces the TCO for the customer and is very good for Cummins because at the end of engine lifecycle it reduced our costs in filters and repairs to the fuel system."

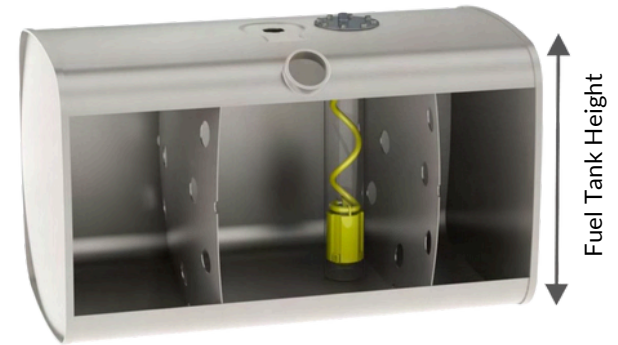
Guillermo Gonzalez, Head of New Products, Repowers and Commissioning at Cummins Chile





# TECHNICAL SPECIFICATIONS

Parameters	Description
Fuel Flow / Engine Power	330 l/hr (450 kW / 600 hp)*
Operational Temperature	-30°C to +50°C
Warranty	Period
FuelActive® Unit	5 years
Components	Material
Topplate	Stainless Steel 304
Baffle	Stainless Steel 304
Dynamic Float FA10	Plastic hydrocarbon resistant
Flexible Fuel Line FA10	Plastic hydrocarbon resistant, remains pliable when immersed in fuel.
Gasket	BS Nitrile
Gasket	Klingersi



When selecting the correct size FuelActive unit, please measure the fuel tank height and check the engine fuel flow requirements

FA10 FuelActive Unit			
Flow Rate / Hour		Pressure Drop (bar)	
US Gal	Litre	400mm	900mm
32	120	0.02	0.05
40	150	0.03	0.07
47	180	0.04	0.09
55	210	0.05	0.11
63	240	0.06	0.13
71	270	0.07	0.16
79	300	0.08	0.18
87	330	0.09	0.21

FuelActive FA10: - 110kW-450kW (150 - 600hp)		
FuelActive Unit	Unit Height (mm)	Weight (kg)
FA010B12H350	350	3.25
FA010B12H400	400	3.4
FA010B12H475	475	3.53
FA010B12H550	550	3.83
FA010B12H625	625	4.02
FA010B12H700	700	4.12
FA010B12H775	775	4.48
FA010B12H850	850	4.61
FA010B12H900	900	4.73

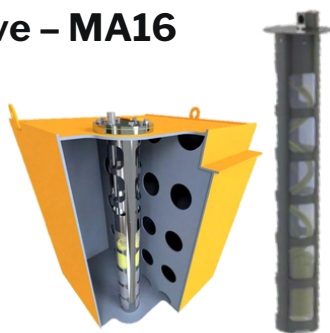
\*kW & hp are approximate and depend on engine specification





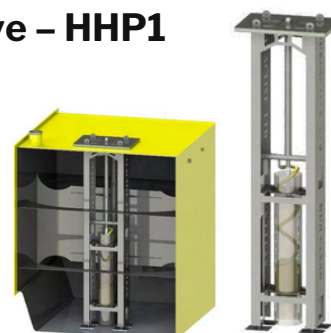
**HHP SERIES FOR LARGE TANKS**

**FuelActive – MA16**



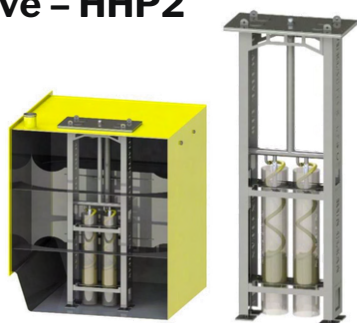
<b>Compatibility</b>	Caterpillar 777, Komatsu 785
<b>Flow Rate</b>	-1350 L/HR
<b>Power Range</b>	600 1400 HP, 450-1000 KW

**FuelActive – HHP1**



<b>Compatibility</b>	Hydraulic Excavators *2M+ Deep tanks
<b>Power Range</b>	< 1750 HP, < 1300 KW

**FuelActive – HHP2**



<b>Compatibility</b>	785-789, 730-830
<b>Power Range</b>	1750 –3500 HP, 1300 –2600 KW

**FuelActive – HHP3**



<b>Compatibility</b>	793 & UP, 930 & UP
<b>Power Range</b>	3500 –5300 HP, 2600-4000 KW

MORE FROM  
**GREEN FLEET**  
SOLUTIONS

*More fuel savings  
Cut more emissions*



**EPURA Self-Cleaning Filters**  
The last air filters you'll ever need.



**ThermaStart Idle Management System**  
Eliminate idling and boosting.



**SkelStart Engine Start Module**  
Never boost a dead battery again.



**DFM - Precision Fuel Flow Meters**  
Unlock efficiency and savings.