

BBio-Dynamic fuel^{(PTY) LTD}

B-TECH 40

www.bd-fuel.com



History

- The founders of Bio-Dynamic Fuel have been manufacturing manually-operated biodiesel machines for over 12 years.
- 1st generation machines were manual and produced between 100 – 250 litres per cycle, and highly complicated to operate.
- In 2006 Carte Blanche televised a bio diesel interview with us.
- BDF team has a strong consumer goods industry background and have incorporated this into our technology (ease of use).
- The B-Tech 40 is patented South African invention, locally manufactured and assembled.



B-Tech 40 processor



Technical Information

- The B-Tech 40litre machines are fully automatic, portable, closed system, patented biodiesel processing machines.
- There are two stages during the process – separation & filtration.
- The conversion from oil to biodiesel takes between 5 to 6 hours.
- Batch: 40 used oil, B-Tech chemical mix, B-Tech Powder.
- Generates ± 40 litres of biodiesel & ± 8 litres of glycerine waste.
- The emergency stop function ensures the process can be restarted if interrupted (power outages, built-in safety checks).
- A standard 220v plug point (single-phase) is required.
- Energy consumption is at 5 kWh – processor idle during stages.



Environment

Companies have an environmental social responsibility with regards to the impact their waste products cause, therefore:

- The manufacture of biodiesel is completely carbon neutral.
- Reduces reputational and risk management caused by unsafe disposal of used cooking oil into water or waste systems.
- Negates health & safety risks of adulterated cooking oil being sold into the informal sector.
- Waste product (glycerine) is collected, recycled into various cleaning products. No waste going down the drain.
- Carbon Tax Act: benefits of accruing and trading accumulated carbon credits.



Cost Of The B-Tech Processers

- The B-Tech 40 is rented at a cost of R3000 per month.(no capital, no extended ROI, assets off book).
- 3-year rental agreement is signed by customers.
- Chemicals supplied in 1000lt drums, deposit on drums of R1500/drum to be paid by customers.
- Once off cost for machine installation & user training to be quoted before installation. Machine deposit of R5000.
- Machine warranty part of the agreement, extras are charge for negligence.



Cost to Produce Bio Diesel

- Cost per R1000lt drum of chemicals is R20 000. Cost per litre is R3,50.
- Cost per machine rental R3000 per month.

Batches/month	Lts/Month	Cost per litre for the machine	Total cost per litre including machine rental
30	1200	R2,50	R6,00
40	1600	R1,88	R5,38
50	2000	R1,50	R5,00
60	2400	R1,25	R4,75
90	3600	R0,84	R4,34



Famous Brands DC's

<u>Locations</u>	<u># of Trucks</u>	<u>Cost of UCO Tank</u>	<u>Litres/ Mnth</u>	<u>Savings @ R8.00/L</u>	<u>40l Machine</u>
Bakery	4	R33 200	1600	R12 800.00 /mnth	1
Mpumalanga	7	R58100	2800	R22 400.00 /mnth	2
Free State	7	R58100	2800	R22 400.00 /mnth	2
Western Cape	14	R116 200	5600	R44 800.00 /mnth	4
Eastern Cape	16	R132 800	6400	R51 200.00 /mnth	4
KwaZulu-Natal	16	R132 800	6400	R51 200.00 /mnth	4
Crown Mines	25	R207 500	10000	R80 000.00 /mnth	7
Midrand	36	R298 800	14400	R115 200.00 /mnth	9
Total	125	R1 037 500	50000	R400 000.00 /mnth	33



Famous Brands DC's

<u>Locations</u>	<u>Litres/ Mnth</u>	<u># of 40 L Machine</u>	<u>Plant Floor Space</u>	<u>Equipment cost (excl. delivery, installation, accomodation, training)</u>
Bakery	1600	1	4000 x 3500	R24 285.71
Mpumalanga	2800	2	4500 x 3500	R24 285.71
Bloemfontien	2800	2	4500 x 3500	R24 285.71
Western Cape	5600	4	6000 x 5000	R29 357.14
Eastern Cape	6400	4	6000 x 5000	R29 357.14
KwaZulu-Natal	6400	4	6000 x 5000	R29 357.14
Crown Mines	10000	4	6000 x 5000	R29 357.14
Midrand	14400	9	10000 x 5000	R29 357.14
Total	50000	33		R219 642.86



Famous Brands DC's

<u>Locations</u>	<u>Litres/ Mnth</u>	<u>Pre-Filter</u>	<u>Pumps</u>	<u>1000lt Tank</u>	<u>2500lt Tank</u>	<u>Electronic Meters</u>	<u>Fuel Nozzles</u>
Bakery	1600	1	2	2		3	2
Mpumalanga	2800	1	2	2		3	2
Bloemfontien	2800	1	2	2		3	2
Western Cape	5600	1	3		2	3	3
Eastern Cape	6400	1	3		2	3	3
KwaZulu-Natal	6400	1	3		2	3	3
Crown Mines	10000	1	4		1	3	1
Midrand	14400	1	3		2	3	3
Total	50000	8	21	6	10	24	21



Mpumalanga plant



Mpumalanga plant



Mpumalanga plant

