



Rotapower® Engine Overview

Freedom Motors, Inc.
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Rotapower® engines run on any fuel, provide high power-to-weight ratios, generate low vibration and harmful emissions, and are cheaper to buy and maintain as compared with conventional engines****.

Rotapower Model →		27 SERIES	150 SERIES		530 SERIES				650 SERIES	
No. of Rotors		1	1	2	1	2	3	4	1	2
Displacement		27cc	150cc	300cc	530cc	1060cc	1590cc	2120cc	650cc	1300cc
Moving part count		2	2	3	2	3	4	5	1	2
Engine Weight*		4 lb	25 lb	35 lb	48 lb	70 lb	92 lb	114 lb	110lb	154lb
		2 kg	11 kg	16 kg	22 kg	32 kg	42 kg	52 kg	50 kg	70 kg
Starter system		Recoil	Recoil and/or starter	Recoil and/or starter	Recoil and/or starter	Starter	Starter	Starter	Starter	Starter
Fuel system		Carburetor	Carburetor or EFI	Carburetor or EFI	Carburetor or EFI	Carburetor or EFI	Carburetor or EFI	Carburetor or EFI	Carburetor or EFI	Carburetor or EFI
Housing Cooling		Air	Liquid or Air	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid	Liquid
Rotor Cooling		Charge	Charge or Air	Charge or Air	Charge or Air	Charge or Air	Charge or Air	Charge or Air	Charge or Air	Charge or Air
Dimensions L,W,H**		5 x 5 x 4 in.	7 x 7 x 7 in.	10 x 7 x 7 in.	10 x 11 x 11 in.	16 x 11 x 11 in.	21 x 11 x 11 in.	26 x 11 x 11 in.	17 x 17.4 x 17.9 in.	22.7 x 17.4 x 17.9 in.
		13 x 13 x 9 cm	18 x 18 x 18 cm	25 x 18 x 18 cm	25 x 28 x 28 cm	41 x 25 x 25 cm	53 x 28 x 28 cm	66 x 28 x 28 cm	66 x 28 x 28 cm	43 x 44 x 46 cm
Standard	Max Power	2.5 hp	20 hp	40 hp	60 hp	120 hp	180 hp	240 hp	75 hp	150 hp
		1.8 kW	15 kW	30 kW	45 kW	95 kW	135 kW	180 kW	56 kW	112 kW
	Rated Power	2 hp	15 hp	30 hp	40 hp	80 hp	120 hp	160 hp	60 hp	120 hp
		1.5 kW	11 kW	22 kW	30 kW	60 kW	90 kW	120 kW	45 kW	90 kW
	Rated Speed	9,000 rpm	6,000 rpm	6,000 rpm	4,500 rpm	4,500 rpm	4,500 rpm	4,500 rpm	4,500 rpm	4,500 rpm
	Rated S.F.C.	.55 lb/hp-hr	.5 lb/hp-hr	.5 lb/hp-hr	.45 lb/hp-hr	.45 lb/hp-hr	.45 lb/hp-hr	.45 lb/hp-hr	.45 lb/hp-hr	.45 lb/hp-hr
336 g/kWh		305 g/kWh	305 g/kWh	275 g/kWh	275 g/kWh	275 g/kWh	275 g/kWh	275 g/kWh	275 g/kWh	275 g/kWh
High Performance	Max Power	3 hp	25 hp	50 hp	80 hp / 125 hp***	160 hp / 250 hp***	240 hp / 375 hp***	320 hp / 500 hp***	150 hp	300 hp
		2.2 kW	19 kW	37 kW	60 kW / 93 kW***	120 kW / 186 kW***	180 kW / 280 kW***	240 kW / 373 kW***	112 kW	224 kW
	Max Speed	12,000 rpm	9,000 rpm	9,000 rpm	7,500 rpm	7,500 rpm	7,500 rpm	7,500 rpm	6,700 rpm	6,700 rpm

* Includes pull starter, alternator, lubrication, fuel and ignition systems (no exhaust)

**Long block (includes flywheel)

***When running on Ethanol (Gasoline is default)

**** Meets EPA guidelines without a catalyst