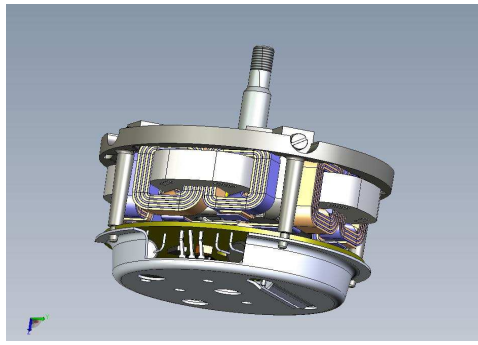


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The "Plusmotor"



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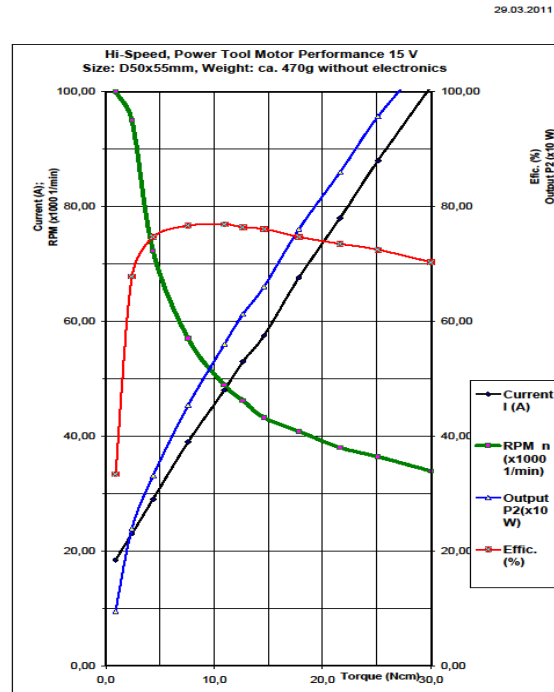
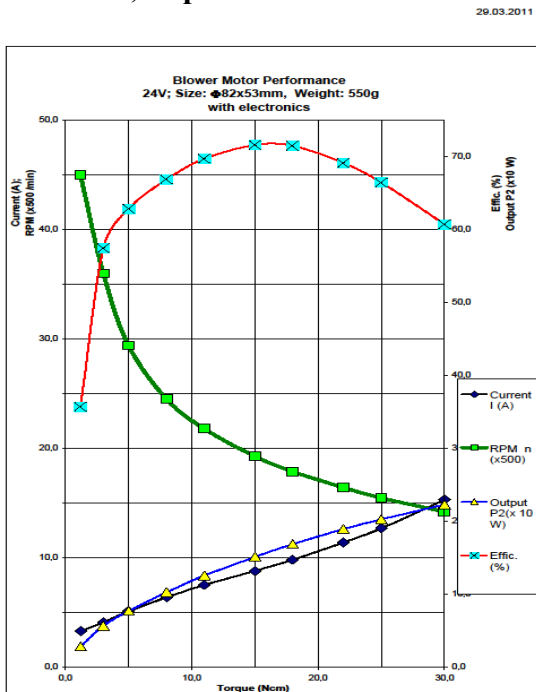
Dear visitor,

We exhibit one of the first series-like samples of the "Plusmotor" (switched reluctance motor).

As you can see, this new, patented motor does not look like the usual ones.

The unique features of the Plusmotor open new chances for output (up to the kW-range), speed (above 100 000 RPM possible) and price. (Aluminium instead of copper)

Characteristics,output:



Some „Plusmotors“	Input (V,W)	Speed, Torque RPM,-Ncm	Efficiency %	Size, weight without electronics
Blower Motor	24V, 211W, s.above	9630-15Ncm	72%	D82x39mm 515g
Flat Tool Motor	21V, 1050W	39000-17Ncm	66%	D82x39mm 515g
Hi Speed Motor	15V 875Ws.above	43200-15Ncm	77%	D50x55mm, 470g
ECF- Motor	13V 400W	3220-90Mcm	75%	D118x60mm,.2100g

Further details www.plusmotor.de Technical approach info@plusmotor.de

The outstanding parameters of the Plusmotor rely on its new physical and electrical design. Here they are:

- metal strip windings, with space factor from 70 this 90 per cent (for special motors “impossible” more than 100%!). State of the art motors usually have winding space factors from 30 to 55%.

- these new windings permits to replace the **costly copper** by lightweight **aluminium**

- the windings are placed on the outer vented area, so that the heat removal is improved.

- the rotor consists of a lamination stack inserted on a shaft, it is robust, cheap and high-speed proof, (no permanent magnets)

- the new mechanical design with very short fixture paths between stator and the rotor diminish the characteristic noise of a SR- motor,

-the very simple power circuit with direct recycling of the switch-of (demagnetisation) energy lead to high efficiency up to the highest power ranges,

-the “natural” characteristic of the Plusmotor resembles to that of a series-wound motor; this gives the motor a high elasticity (at start a “trek ox”, it speeds up at lower load to become a racehorse), and predestines it for the electrical mobility. A high power/ weight ratio is possible. Below of this “natural” characteristic, the behaviour of this motor can be modified as necessary by the control electronics.

-the visibly very simple Plusmotor can be automatically manufactured with a moderate investment.

Applications: the Plusmotor is especially suitable for high-speed, high pressure blowers, lightweight cordless power tools, high speed spindles, “electrical mobility”, and much more.

Some automotive applications

- electrical turbocharger,
- secondary air pump,
- electrical drive for A/C compressors,
- other small motors

We offer:

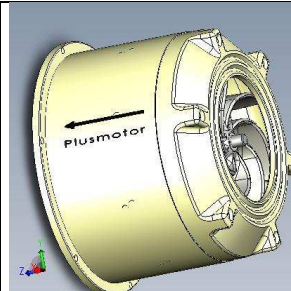
- An analyse of your application, allround consultancy, (Applications, concept of new products, strategy)
- to implement a first sample, to test it, cooperation, possibly a series production,
- a license, possibly exclusive under interesting conditions,
- conceptions and help to prepare a mass series production,
- consultancy for the start of production.

The exhibited motor (please look at the characteristics for this size) can be manufactured according to your specification thank to the cooperation of our companies in a reasonable short time.

We can also manufacture samples of other Plusmotors (other sizes and characteristics) and develop them up to series maturity.

Development of some products with the Plusmotor:

as a first product please see below the radial axial blower e.g. for air filtering units

	Blowers	Input V, W	Speed RPM	Pressure mmH2O	Flow m³/h	Blower Eff%	Size, mm	Weight, g
	Rad-ax blower with Plusmotor, s.Picture	24V, 130W	13000	160	80	36	D128x88	880
	Automot. air pump with Plusmotor	13,5V 380W	30000	1350	33	44	D125x65	870
	Automot. air pump, foreign -famous brand-	13,5V 460W	19000	1350	33	39,5	D125x180	1500

It is our commitment to help people and companies having interest in Plusmotor with new application concepts for blowers, power tools, automotive products with small motors, as a way to open a cooperation.

This makes a lot of sense, because we have the best knowledge of the properties of the Plusmotor and we also have a wide experience with interdisciplinary preliminary development on the mentioned technical fields.

Based on the actual and future patents, we think that it is possible to make “win-win” arrangements for future products.

We have good means for manufacturing and testing the first samples of new products, (metal, electrical and plastic parts, rapid prototyping), so that we can offer to our potential customers concepts, testing and evaluating samples with a minimum of expense. ”everything from one source”.

Approach to our engineering office: :<<<< info@plusmotor.de>>>>

Contact address: info@plusmotor.de