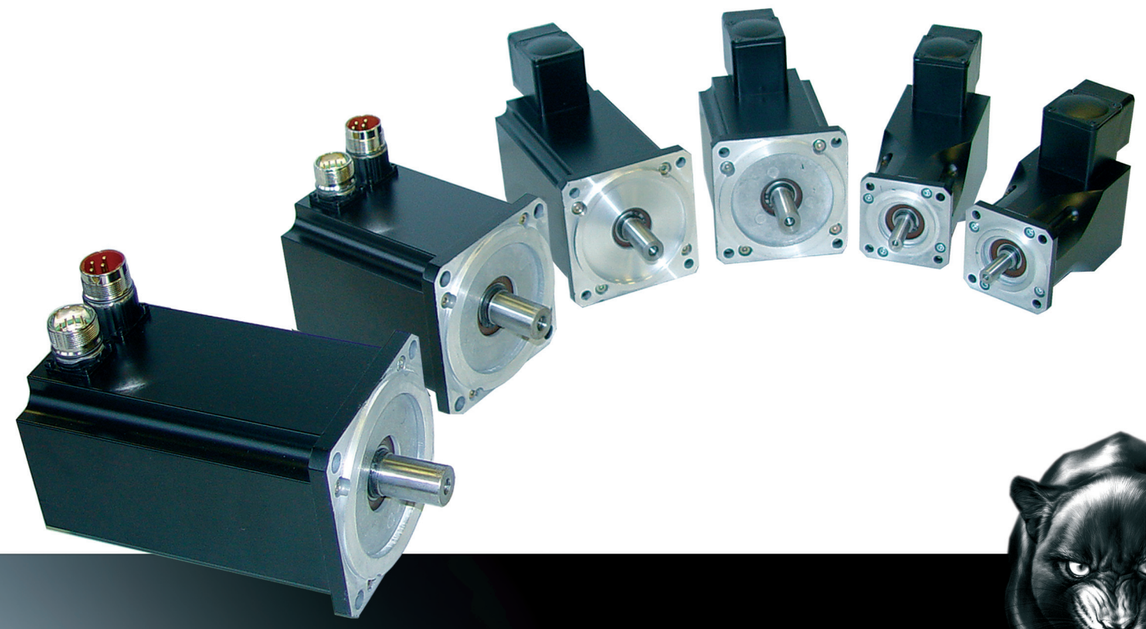
Dynamic. Precise. Powerful.

Black Panther® Servo

GROSCHOPP

Groschopp AG

Drives & More



Phone us and find out more.

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Black Panther® Servo

*The "family" of brushless AC-Servomotors manufactured by **Groschopp AG** are now complemented by the new "King-class" of High-End-Servomotors.*

By applying the most modern analytical and numerical calculation- and simulation systems, a new generation of High-End-Servomotors was developed:

A new Milestone in the History of Servo-Motors!

The Servomotor Black Panther®
In combination with a new production technology, a 2- to 3-times higher power density was achieved compared with common High-End-Servomotors through a revolutionary new development of active core elements (stator, rotor, magnets).

The development of a special magnetic rotor made it possible to align the magnet segments without additional strapping. Furthermore, by choosing an optimal ratio between the number of slots and the number of poles, a new winding technique (concentrated winding) was implemented. All of the above not only led to a marked increase in motor performance, but also enabled a very process-safe, cost-saving and fully automated production.

The new type series of Black Panther have the following advantages:

High Dynamics:
By applying the most modern numerical calculation systems as regards mechanical tension, stress and strain an optimal rotor-lamination geometry was developed through reduction to the lowest possible rotor inertia.

Highest possible Power Density:
In applying computer-aided parameter studies, an optimal ratio between the number of poles versus the number of slots was achieved as regards power density and efficient production. Furthermore, by using large-scale magnetic field calculations (FEM) the measurements of both stator- and rotor-laminations were optimized, yielding an optimal electro-magnetic utilization. Using 3D-FEM-simulations, the heat-flow and temperature-distribution was calculated and optimized. All of the above led to a 2- to 3-times higher power density of these new motors compared with common Servomotors.

With the **Black Panther** we offer our customers a system which sets completely new standards in the field of High-End-Servomotors

Black Panther® – Dynamic precision at highest power density!

- extremely high power density
- high positioning accuracy
- very high dynamics
- torsion-rigid drive shaft (brake at drive-side)
- IP 65
- various positioning systems: resolver, optical positioning devices
- extremely good price/output ratio
- B5-flange
- compact built
- basically suitable for Groschopp reducers and those of other manufacturer's
- can be operated with both Groschopp servo-controllers and other servo-controllers

Type	Rated output* Watt	Rated torque Nm	Type length mm
EGK 48	170...320	0,53...1,0	30...60
EGK 65	420...800	1,4 ...2,6	30...60
EGK 80	940...1.700	3,0 ...5,5	40...80

*at 3000 rpm

SERVO-SYSTEMS

VOLKSSERVO®	ECONOMY-SERVO	Black Panther®
Synchronous BGK-NV series Servomotor (with integrated transducer system)	Synchronous BGK-NR series (with integrated resolver)	Compact High-End Synchronous EGK-N series with different transducer systems
Digital RBD series 4-Q regulator	various regulators with resolver evaluation	Servo controler with resolver- or incremental encoder evaluation