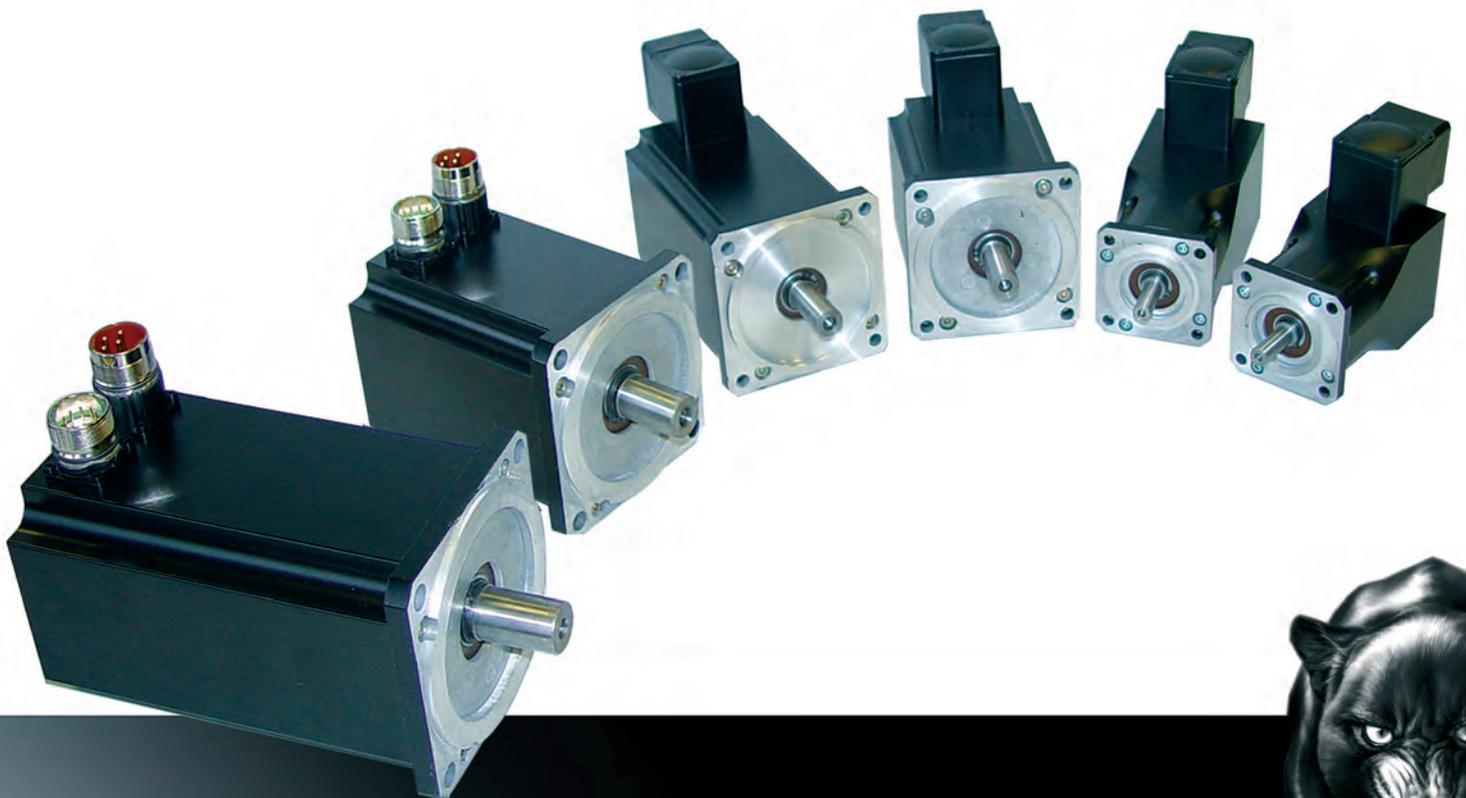
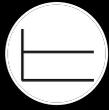


Dynamic. Precise. Powerful.

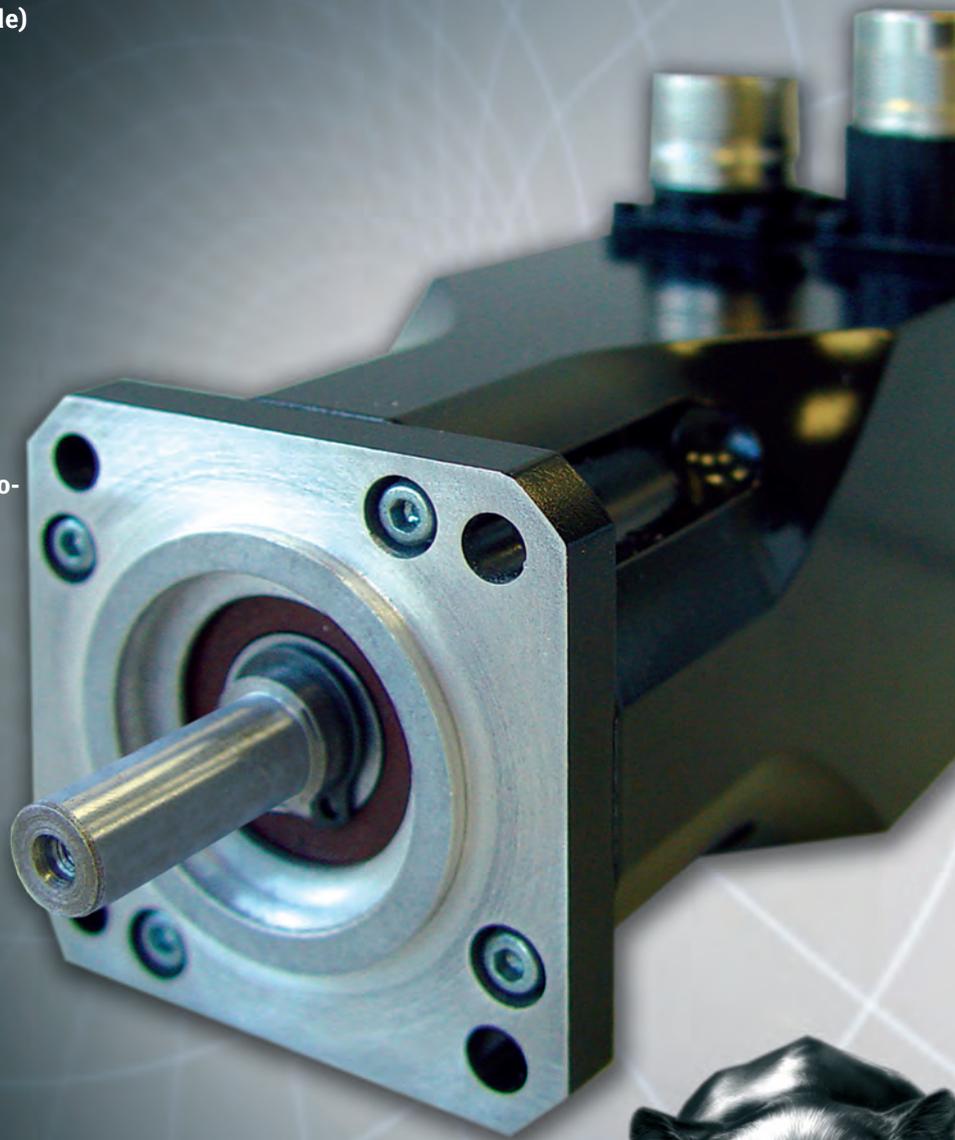
Black Panther[®] Servo



GROSCHOPP 



- 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*	Rated torque	Type length
	Watt	Nm	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

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:

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.

Black Panther[®] – Dynamic precision at highest power density!

A new Milestone in the History of Servo-Motors!

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

SERVO-SYSTEMS

VOLKSSERVO[®]

Synchronous BGK-NV
series Servomotor
(with integrated transducer system)

Digital RBD series
4-Q regulator

ECONOMY-SERVO

Synchronous BGK-NR series
(with integrated resolver)

various regulators with
resolver evaluation

Black Panther[®]

Compact High-End Synchronous
EGK-N series with different
transducer systems

Servo controller with resolver-
or incremental encoder evaluation

GROSCHOPP 

Groschopp AG

Drives & More

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