



# Iskra

## Alternators - AAK compact

### Applications

For passenger cars; commercial vehicles; heavy-duty & special

### Design

The alternator is a three-phase, 12-pole synchronous self-excited generator with two internal fans and built-in regulator and rectifier. The compact construction and carefully selected materials ensure improved technical characteristics and long -ife and service-free operation even under the harshest conditions of high and low temperatures, salt spray, humidity,

### Stator

The stator has a three-phase winding on a laminated pack. The selected design and high filling factor of the stator slots provides improved cooling, low noise and high output characteristics.

### Cooling

Two internal fans positioned on the claw poles provide more effective cooling with lower noise and higher protection against accidental contact as well as higher output.

### Rotor

Smaller slip rings provide higher brush durability, even at high speeds. Encapsulated slip rings offer increased durability of the alternator.

### Rectifier

Sandwich construction of the rectifier with press-fit Zener diodes provides the low temperatures of the rectifier diodes, high resistance to vibrations and protection of loads on the vehicle against alternator over voltages. The installation of the rectifier on the outer side of the rear end bracket ensures flexible arrangement of all types of terminals.

### Regulator

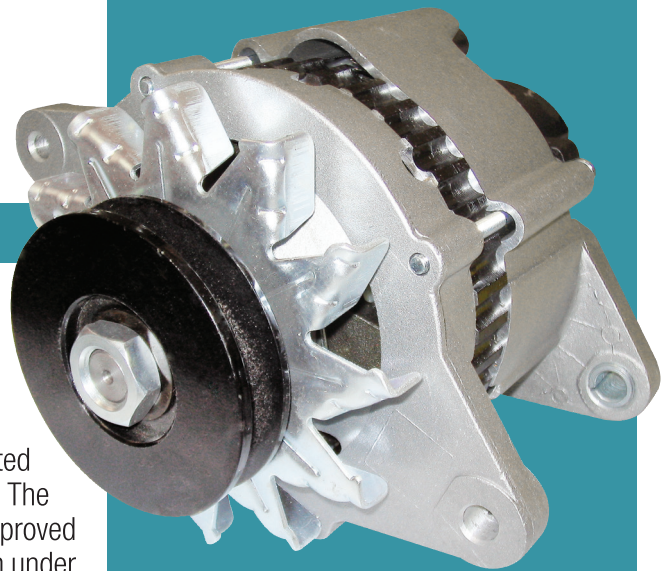
The regulator together with the brush holder is assembled on the rear end bracket. Regulators use microelectronic technology and are mono or multifunction. The highest quality of brushes ensure long life of the alternator.

### Brackets - Bearings - Pulleys

Brackets, bearings and pulleys are made according to the customers' requirements. A range of special sealed bearings makes it possible to design alternators for specific installations, operating in the harshest conditions whilst achieving long, maintenance-free life.

### Electrical terminals

Electrical terminals are according to the requirements of the customers.



Part no.	Model	Volts	Amp
T027909203	AAK5567	14V	95A
T027909206	AAK5120	28V	50A
T027909209	AAK3178		

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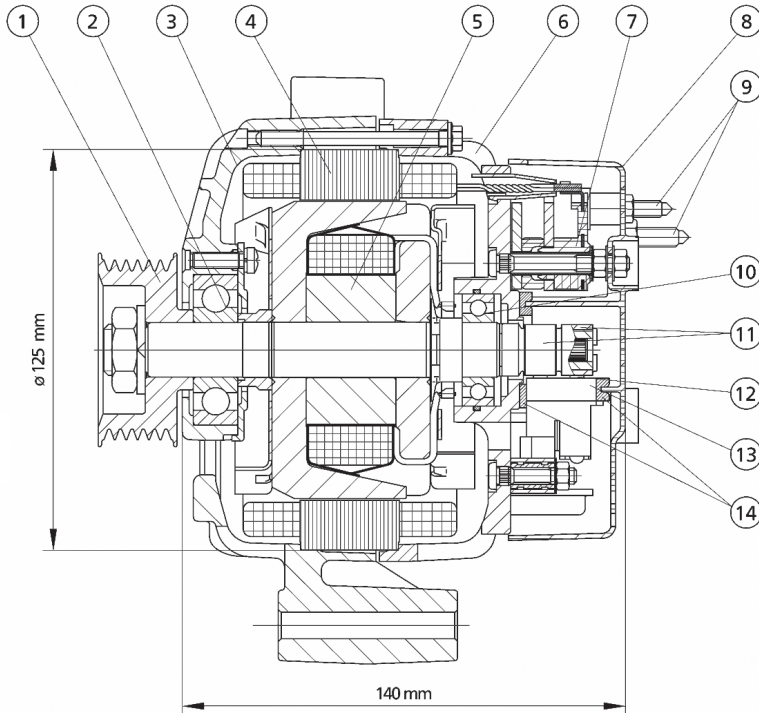
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## Cross Section

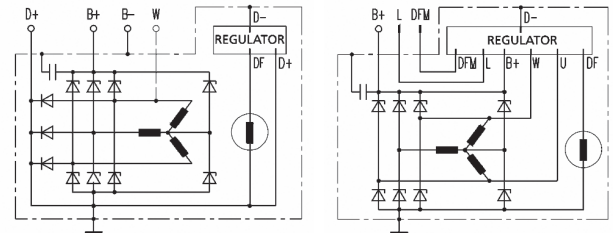


- |                                      |   |
|--------------------------------------|---|
| 1. Pulley                            | regulator)                              |
| 2. Drive end bearing                 | Term. B+; L; DFM (multi-function        |
| 3. Drive end bracket                 | regulator)                              |
| 4. Stator with winding               | 10. Rear bearings                       |
| 5. Rotor                             | 11. Slip rings                          |
| 6. Rear bracket                      | 12. Brush                               |
| 7. Rectifier with diodes             | 13. Brush holder with voltage regulator |
| 8. Protective cover                  | 14. Rubber gaskets                      |
| 9. Term. B+; B-; D+; W (monofunction |   |

## Main Technical Data

Type	AAK Compact	
Nominal Voltage	14V	28V
Nominal Current	70A - 120A	40A - 60A
Stator Diameter	125mm	
Weight (without pulley)	~5.3kg	
Max. Speed (permanent / short time)	15,000 rpm / 18,000 rpm	
Regulator	Built-in mono or multi-function hybrid or microelectronic tech.	
Pulley and drive end brackets	Different types according to customers requirements	
Terminals	Screw and/or blade terminal	
Drive end bearing	Type 6303 / 6304E	
Rear end bearing	Type 6003	
Power diodes	Press-fit Zener diodes	
Protection of the slip rings and bushes	Protected against ingress of solid foreign matter & water spray (IP54)	
Ambient temperature	From -40°C to + 110°C	

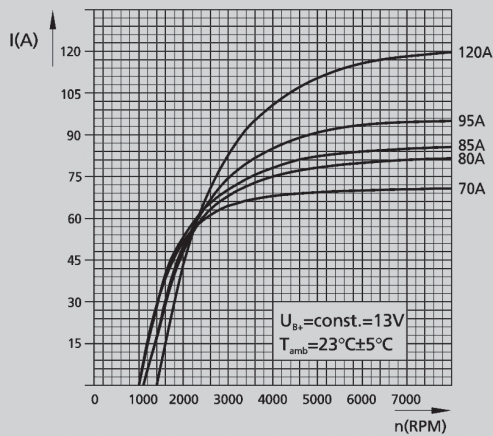
## Connection Diagram



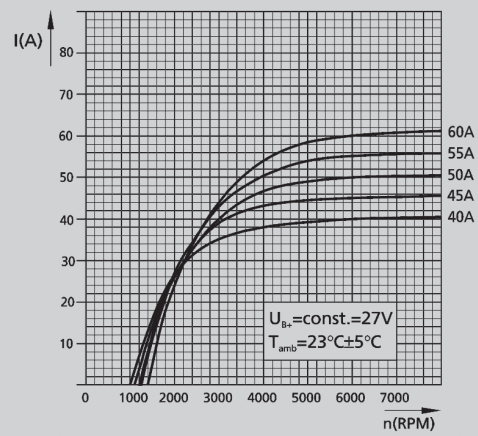
Monofunction regulator

Multi-function regulator

## Characteristics



	n. (RPM)	I (A) at 1800 RPM	I (A) at 6000 RPM
14V 70A	1000	47	70
14V 80A	1100	40	80
14V 85A	1000	47	84
14V 95A	1100	42	94
14V 120A	1400	30	115



	n. (RPM)	I (A) at 1800 RPM	I (A) at 6000 RPM
28V 40A	1000	23	40
28V 45A	1100	22	45
28V 50A	1200	22	50
28V 55A	1250	21	55
28V 60A	1400	18	60